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## *Final Report*

### **Task 12F**

# **DREDGING NEEDS STUDY**

**RHODE ISLAND REGION LONG-TERM DREDGED  
MATERIAL DISPOSAL SITE EVALUATION PROJECT**

**Final Report**

**Task 12 F  
Dredging Needs Study**

**Rhode Island Region Long-Term Dredged Material  
Disposal Site Evaluation Project**

**Contract Number DACW33-01-D-0004  
Project Number Delivery Order 0002**

**to**

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## **EXECUTIVE SUMMARY**

The US Army Corps of Engineers and the US Environmental Protection Agency are conducting the Rhode Island Region Long-Term Dredged Material Disposal Site Evaluation Project to evaluate the designation of an offshore dredged material disposal site(s). As part of the project, a Dredging Needs Study was conducted to determine of the current dredging needs and volumes of dredged material in the Rhode Island and southeastern Massachusetts region over the next 20 years. A survey of non-Federal, navigation dependent facilities was used to project future quantities of dredged material from public and private facilities. The survey questionnaire was designed to: verify the facility location, type, nature and size of business, future dredging needs, and the financial impact of not dredging. Of the 450 questionnaires distributed, 178 (39.6%) responses were received. Future dredging needs identified by the returned questionnaires were combined with projections from proposed Federal navigation projects and supplemented with historic dredging data to establish an estimated amount of total dredged material for which disposal will be needed by 2021. The survey results indicate that between 2002 and 2021 the Rhode Island and southeastern Massachusetts region has the potential to generate almost nine million cubic yards of dredged material that is not usable for beach nourishment or other forms of beneficial use. This volume estimate maybe low because this region has had limited disposal options for many years. In addition, the return rate for the surveys was such that anticipated future dredged material volumes may be low. It is also possible that the historic dredging data used to support this volume determination may not be predictive of future dredging volumes. Moreover, it is also recognized that some of the material in this projection will not be determined to be suitable for ocean disposal during the project specific permitting process and that other disposal options will have to be pursued.

Based on the results of the dredging needs analysis, the study area was divided into four dredging centers or geographical areas that share a logical point of origin for dredged material. The dredging centers defined for the Rhode Island and southeastern Massachusetts region are: Southern Rhode Island and Block Island, Narragansett Bay, Buzzards Bay, and Southern Cape Cod and the Islands. The Narragansett Bay Dredging Center contains the most facilities and the highest volume of potential dredged material in the next 20 years, nearly 5 million cubic yards. This center also has the most municipalities with Federal navigation projects and the most facilities projecting over 500,000 cubic yards of dredged material. This does not include the 8 to 14 million cubic yards estimated for the proposed construction of a container port at Quonset Point/Davisville in North Kingstown, Rhode Island, should the concept be realized. The Southern Rhode Island and Block Island Dredging Center is the smallest with 779,000 cubic yards of dredged material.

Although this study focuses on dredging needs of the region, the questionnaire addressed other issues such as the economic impacts of not dredging. Most municipalities raised concerns over costs and the need for Federal assistance in maintenance dredging. Both public and private facilities stated that waterways are becoming less navigable at low tide and vessels rely on high tide to leave and enter facilities, increasing congestion during peak times. Additional comments indicate that lack of dredging may lead to reduced dockage space and loss of rental slips as well as limiting the size of recreation and commercial vessels serviced at facilities. The survey shows that most respondents see the lack of dredging as having a negative impact on the economic vitality of public and private facilities.

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## **1.0 INTRODUCTION**

The US Army Corps of Engineers (Corps) and the US Environmental Protection Agency are conducting the Rhode Island Region Long-Term Dredged Material Disposal Site Evaluation Project to evaluate the designation of an offshore dredged material disposal site(s). As part of the project, a Dredging Needs Study for the Rhode Island and southeastern Massachusetts region was conducted. The study involved identifying all non-Federal navigation dependent facilities in the study area and distributing a questionnaire that asked the facility to estimate their dredging needs within the next 20 years. Quantities of material were projected for future Federal navigation projects from a review of historic dredging activities and incorporated into the total estimated volumes. The results of these tasks were combined to determine future dredging needs and future quantities of dredged material.

## **2.0 PURPOSE**

This dredging needs study was performed to 1) estimate future quantities of material that could be dredged from the Rhode Island and southeastern Massachusetts coastal areas over the next 20 years if a disposal site were available and 2) to gather information to determine the impact on facilities if no disposal site is designated. Components or tasks of this study included:

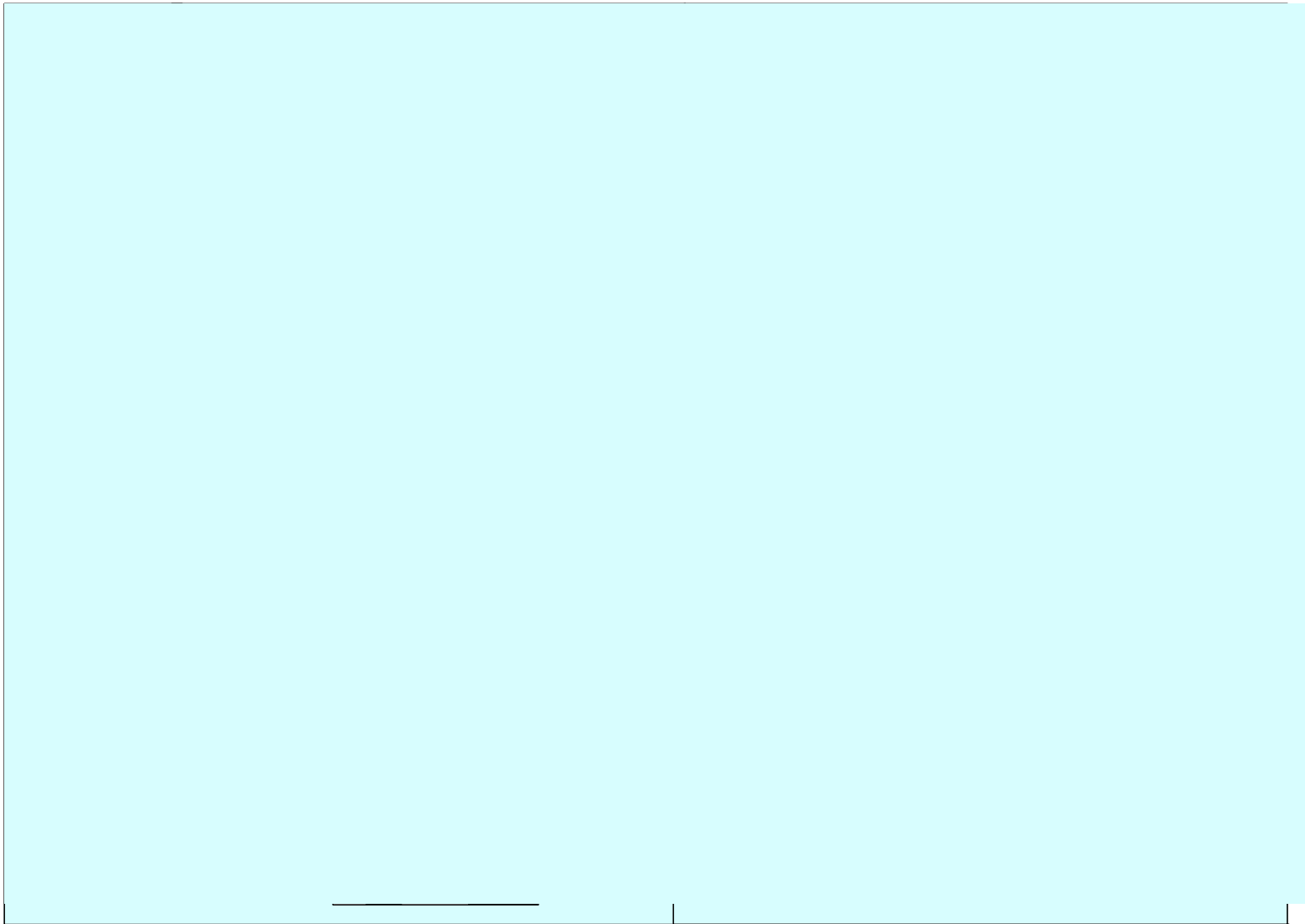
- Identification of the Universe of Navigation Dependent Facilities in Study Area
- Survey of Navigation Dependent Facilities
- Review of Army Corps of Engineers Permit Data
- Projection of Future Dredging Volumes from Federal Navigation Projects
- Determination of Dredging Needs and Future Quantities
- Evaluate the impact to Navigation Dependent Facilities of not dredging.

Each task built on the previous task to project future dredging volumes within the next 20 years. Identifying the location and volume of dredged material enabled a more detailed analysis of alternative disposal locations to be conducted in the Rhode Island Sound Disposal Site Designation Environmental Impact Statement.

## **3.0 METHOD**

### **3.1 Dredging Needs Study Area**

The area studied consists of the entire Rhode Island and southeastern Massachusetts coastlines, extending from Westerly, Rhode Island to Chatham, Massachusetts, including Block Island, Martha's Vineyard and Nantucket Island. All harbors, major rivers, and port or navigation-dependent facilities were included in the study. The area is shown in Figure 1 with an association key listed in Table 1.



**Figure 1. RI Region Long-Term Dredged Material Disposal Site Evaluation Project – Dredging Needs Study: Study Area (July 2002).**

**Table 1. RI Region Long-Term Dredged Material Disposal Site Evaluation Project - Key to Figure 1.**

Map ID	City/Town	State
1	Westerly	Rhode Island
2	Charlestown	Rhode Island
3	South Kingstown	Rhode Island
4	Narragansett	Rhode Island
5	North Kingstown	Rhode Island
6	East Greenwich	Rhode Island
7	Warwick	Rhode Island
8	Cranston	Rhode Island
9	Providence	Rhode Island
10	Pawtucket	Rhode Island
11	East Providence	Rhode Island
12	Barrington	Rhode Island
13	Warren	Rhode Island
14	Bristol	Rhode Island
15	Swansea	Massachusetts
16	Dighton	Massachusetts
17	Berkley	Massachusetts
18	Freetown	Massachusetts
19	Somerset	Massachusetts
20	Fall River	Massachusetts
21	Tiverton	Rhode Island
22	Little Compton	Rhode Island
23	Portsmouth	Rhode Island
24	Middletown	Rhode Island
25	Newport	Rhode Island
26	Jamestown	Rhode Island
27	New Shoreham (Block Island)	Rhode Island
28	Westport	Massachusetts
29	Dartmouth	Massachusetts
30	New Bedford	Massachusetts
31	Acushnet	Massachusetts
32	Fairhaven	Massachusetts
33	Mattapoisett	Massachusetts
34	Marion	Massachusetts
35	Wareham	Massachusetts
36	Gosnold	Massachusetts
37	Bourne	Massachusetts
38	Falmouth	Massachusetts
39	Mashpee	Massachusetts
40	Barnstable	Massachusetts
41	Yarmouth	Massachusetts
42	Dennis	Massachusetts
43	Harwich	Massachusetts
44	Chatham	Massachusetts
45	Nantucket	Massachusetts
46	Edgartown	Massachusetts
47	Oak Bluffs	Massachusetts
48	Tisbury	Massachusetts
49	West Tisbury	Massachusetts
50	Chilmark	Massachusetts
51	Aquinnah (formerly Gay Head)	Massachusetts



### **3.2 Universe of Navigation Dependent Facilities**

The first task of the Dredging Needs Study was to identify the universe of navigation dependent facilities in the Rhode Island and southeastern Massachusetts region that rely on dredging for continued usage. These facilities include deep-draft shipping terminals, marinas and yacht clubs, and government facilities such as the US Coast Guard, US Navy, and municipal wharves.

#### **3.2.1 Sources**

Each of the following sources was searched to identify and locate navigation dependent facilities within the study area.

**Internet Directories** – The primary directory used was the Google search engine ([www.google.com](http://www.google.com)), which was searched for each city and town in the study area using many key words including: marina, boat repair, harbormaster, shipyard, dock, ferry, landing, wharf, terminal, port, yacht clubs, berth.

Among the specific web sites visited were:

**Ports of Southern New England (US Army Corps of Engineers, Port Series #4)** – The US Army Corps of Engineers, Water Resources Support Center, Navigation Data Center (NDC) publishes the Port Series Reports. The reports provide detailed information for all major port facilities in the United States and are available on CD-ROM and on the NDC web site. Each dock or wharf is listed separately even in cases where they are located at the same facility. ([www.iwr.usace.army.mil/ndc/psbook.htm](http://www.iwr.usace.army.mil/ndc/psbook.htm)) (USACOE 1994)

**New England Boaters Almanac** – This guide contains marinas, wharfs and yacht clubs in the New England area (Geis 2002).

**Charnet.com** – This Internet database includes all marinas and yacht clubs within the United States and includes name, city/town and phone number. ([www.charnet.com/marinas/rhodeisland.html](http://www.charnet.com/marinas/rhodeisland.html))

**SellRV.com** – This Internet database includes all marinas and yacht clubs within the United States and includes name, city/town and phone number. ([www.sellrv.com/marinas/Massachusetts\\_marinas.htm](http://www.sellrv.com/marinas/Massachusetts_marinas.htm) and [www.sellrv.com/Marinas/RhodeI\\_marinas.htm](http://www.sellrv.com/Marinas/RhodeI_marinas.htm))

**Coast Guard Stations, First District** – This website lists all Coast Guard Stations that have search and rescue capabilities, provide lookout, communication and/or patrol functions to assist vessels in distress. Listings are for Vermont, Maine, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, and New Jersey. ([www.towboatcapecod.com/USCGstations.htm](http://www.towboatcapecod.com/USCGstations.htm))

**Long Island Sound Dredged Material Disposal EIS Economic Survey Database, Appendix C, October 22, 2001** – This survey database contains facilities in western Rhode Island, including Charlestown, Narragansett, Wakefield, Weekapaug, West Kingston, Westerly and New Shoreham (Block Island), which are a part of this study (USEPA and USACOE 2001).

**RI Economic Development Corporation** ([www.riedc.com](http://www.riedc.com))

**The State of Massachusetts** ([www.state.ma.us](http://www.state.ma.us))

**Rhode Island Marine Trade Association** ([www.rimta.org](http://www.rimta.org))

**Massachusetts Marine Trade Association** ([www.boatma.com](http://www.boatma.com)).

### **3.2.2 Navigation Dependent Facility List**

Information from the above sources were combined to compile a list of the navigation dependent facilities and contacts within the Rhode Island and southeastern Massachusetts region. Lists were cross-referenced to avoid duplication and contact information was verified. The final list of navigation dependent facilities became the base of the database for the needs study.

## **3.3 Survey of Navigation Dependent Facilities**

A questionnaire was used to gather data from the navigation dependent facilities identified in the previous task. The questionnaire was designed to verify the facility location, type, nature and size of business, estimate future dredging needs, and comment on the financial impact of not dredging. Appendix A contains a copy of the survey packet, which included a cover letter, the questionnaire, and location map. The packet was mailed April 18, 2002. Each facility that did not respond was contacted for a follow-up between May 13 and May 24, 2002 as a reminder and to encourage them to return the questionnaire. It was noted in the database if a message was left at the facility, if another questionnaire was sent, or if the facility did not intend to return the questionnaire. Additionally, those facilities which were identified as likely representing a large portion of dredged material and had not returned a questionnaire within two weeks (25 facilities in Rhode Island and 25 in Massachusetts) were contacted for personal interviews. Information collected was added to the database of navigation dependent facilities.

Several facilities on the western coast of Rhode Island and Block Island were already surveyed as part of the Long Island Sound Dredged Material Disposal Environmental Impact Statement Economic Survey (USACE, 2001). The Corps furnished information that was collected in 2001 for facilities in the towns of Charlestown, Narragansett, Wakefield, Weekapaug, West Kingston, Westerly and New Shoreham (Block Island). This information is included in the database.

## **3.4 Determination of Dredging Needs and Future Quantities**

Dredging needs and estimates of future quantities of non-Federal navigation dependent facilities in Rhode Island and southeastern Massachusetts region were assessed through evaluation of responses of the survey questionnaire. The questionnaire asked the facility owners to anticipate the future dredging needs for their facility and to project future maintenance dredged material volumes and potential improvement (expansion or deepening) volumes. Responses were divided into 5-year increments from 2002 to 2021.

In addition, non-Federal facilities that did not respond to the questionnaire but had performed dredging activities within the past 20 years were identified and historic permit data from these dredging projects, where available, were used to predict additional future dredge material quantities. Estimates were made about dredging cycles and amounts using the permit data and added to the projection quantities. It should be noted that dredging activities in Rhode Island over the past 20 years have been minimal due to the limited disposal options or lack of full complement of disposal methods. Therefore, it is assumed that historic permit data from Rhode Island is not representative of future quantities.

Forty-two Federal navigation projects were identified in the region. Estimates of dredging needs and future quantities from these sites were estimated by either calculation of dredged material volumes from the difference in authorized project depths relative to current bottom depths or by using historical dredging information provided in the literature or by Corps project managers. Based on the Corps policy

to use dredged material in a beneficial manner where practicable, Federal navigation projects identified by the Corps as projects that historically used sandy dredged material for beach nourishment were excluded from the total dredging needs volume.

Dredged material volumes for 13 of the 42 Federal projects were determined by calculating the difference in the authorized project depth (as derived from Project Maps [Massachusetts, September 1986 and Rhode Island, September 1988]) and the water depths provided in conditional survey maps dated 1991 to 2000, obtained from the Corps in Concord, Massachusetts. All of the maps show channel boundaries, desired depth of channel, and actual channel topography measured in mean lower low water (M.L.L.W.) or mean low water (M.L.W). The volume of shoaling was measured using a technique known as the average end method. The average end method involves hand calculating the cross sectional area at each end of a selected navigational channel, averaging the two end areas together, then multiplying that number by the length of the channel between the cross sections. Depending on the shape and size of the navigational project, multiple volume calculations were made and added together to estimate the total dredge volume. Dredge cycle information was based on historical dredge records or best professional judgment.

Maintenance volumes for other Federal projects were estimated using historical information obtained either from literature searches or directly from the Corps (permit data). Literature values were used to estimate maintenance volumes and estimated dredge cycle information for Little Narragansett Bay (Westerly), Point Judith (Narragansett), and New Bedford Harbor. The estimated maintenance volumes and estimated dredge cycle information for Cape Cod Canal and Providence River and Harbor were obtained from the Corps.

The anticipated dredging needs and future dredged material volume estimates for the Rhode Island and southeastern Massachusetts region were derived from the survey questionnaire, historic permit data, literature searches, project maps, and Corps project managers. Based on these potential volumes, dredging centers were established to allow for a more detailed analysis of the locus of dredging volumes. There are four dredging centers identified for the study area: Southern Rhode Island and Block Island Dredging Center, Narragansett Bay Dredging Center, Buzzards Bay Dredging Center, and Southern Cape Cod and the Islands Dredging Center. These Dredging Centers and their respective, projected dredging needs are shown in Figure 2.

It is recognized that some of the material that is projected to be dredged from various locations will not be determined to be suitable for ocean disposal and that other disposal options will have to be pursued. The process of permitting disposal of dredged material includes several Federal and state regulatory agencies. An important aspect of the permitting process is an analysis of disposal alternatives. Every permit application must thoroughly examine the need for ocean disposal and consider all alternatives, including beneficial use, upland disposal, and treatment technologies. Material may be permitted for ocean disposal only if there is no practicable alternative location or methods of disposal or reuse available that have less adverse environmental impact or potential risk to other parts of the environment. This is a decision that is made on a project-by-project basis and only after the results of appropriate testing activities are reviewed. A discussion on the activities and process used in determining if dredged material would be considered for ocean disposal is illustrated in Appendix E. However, it was determined during this study that it would be appropriate to include volumes for all projected dredge material (except for the material which has been traditionally used for beach renourishment) in the dredging needs analysis. This would present a worst-case analysis and it is recognized that potential ocean disposal of dredged material is likely to be somewhat lower.

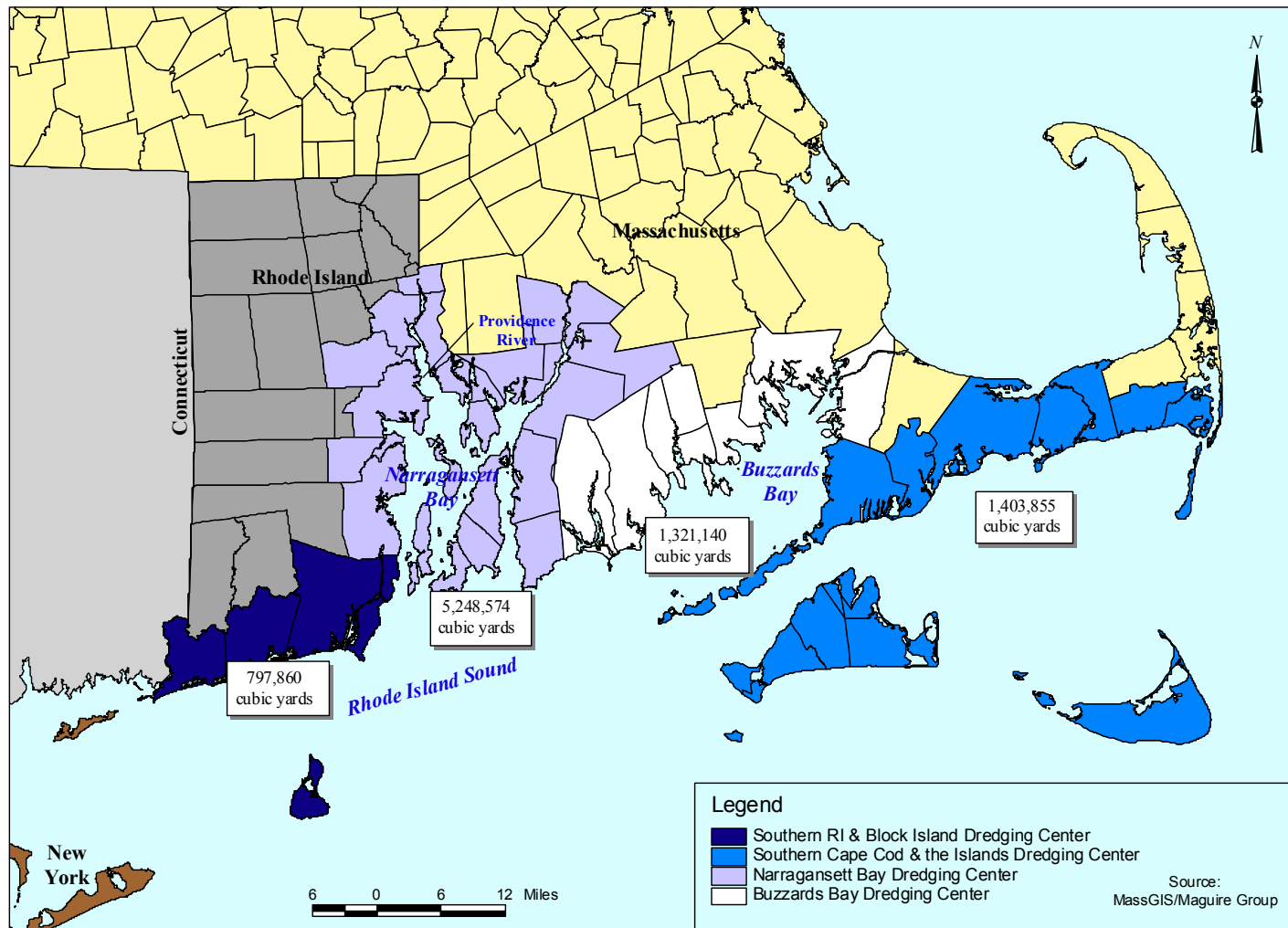


Figure 2. RI Region Long-Term Dredged Material Disposal Site Evaluation Project – Dredging Needs Study: Dredging Centers.

## 4.0 RESULTS

A database was created that includes contact information for the non-Federal navigation dependent facilities surveyed and their responses (or lack of) to the questionnaire. Appendix B contains all the fields in the database. The final number of public and private non-Federal facilities surveyed in this study was 450, which are itemized by state as follows:

	<u>Facilities</u>
Rhode Island	228
Massachusetts	222
TOTAL	450

The list of non-Federal facilities surveyed is located in Appendix C. The list only contains the facility's location and contact to protect the confidentiality of information provided by the respondents. Initially, 141 questionnaires were returned. Subsequently, 50 of the non-responsive facilities were contacted in an attempt to retrieve additional questionnaires. Of the 50 facilities contacted for personal interviews, 37 participated. The final response rate to the survey was 39.6 % (178 non-Federal facilities). Some reasons for not participating included the contact not returning messages to set up the interview or the contact had not received authorization from a supervisor or governing body (i.e. Town Administrator) to participate in the survey.

Forty-two (42) Federal navigation projects were identified in the region, 19 in Rhode Island and 23 in Massachusetts. However, only 26 projects were used to make projections. Estimated volumes from New Bedford/Fairhaven Harbor have been considered unsuitable by the Corps for unconfined open water disposal and therefore are not included in the final dredging needs volumes. Fifteen projects are involved in beach nourishment, as identified by the Corps, and would not require a disposal alternative in the future. Most of the projects that use beach nourishment as a means of disposing of dredged material are located in the Cape Cod area. Appendix D contains the list of all Federal navigation projects, including Federal beach nourishment projects, and projected future maintenance volumes.

Table 2 summarizes the dredging needs and future (20 year) quantities of dredged material for the Rhode Island and southeastern Massachusetts region. The volume of dredged material requiring disposal site(s) over the next 20 years is projected to be 8,771,429 cubic yards. This volume does not include material anticipated for use as beach nourishment or the dredged material from New Bedford/Fairfield Harbor. Neither does the volume include the estimated 8 and 14 million cubic yards of dredged material associated with the proposed construction of a container port at Quonset Point/Davisville in North Kingstown, Rhode Island. This project is excluded in the needs estimate because it is not a Federal navigation project and its realization is unknown at this time.

Nearly all of the projected volume for Rhode Island and southeastern Massachusetts region is for maintenance dredging. Most of the respondents combined maintenance and improvement dredging activities; only one non-Federal facility surveyed was able to separately identify improvement volumes from maintenance volumes in the amount of 400 cubic yards for each 5-year period. The information in Table 2 indicates that most of the dredging activity will occur within the first 10 years of the planning period.

**Table 2. Summary of Non-Federal Facilities; Total Dredging Needs and Future Quantities of Dredged Material for the Rhode Island and Southeastern Massachusetts Region by 2002 – 2021.**

	2002-2006 (cubic yards)	2007-2011 (cubic yards)	2012-2016 (cubic yards)	2017-2021 (cubic yards)	20-year total (cubic yards)
<b>Private Non-Federal Facilities<sup>1</sup></b>					
20,000 cy or more Maintenance & Improvement	129,000	92,500	32,500	27,520	281,520
20,000 cy or more Maintenance only	287,124	43,500	62,000	22,000	414,624
20,000 cy or more Improvement only	0	0	0	0	0
Less than 20,000 cy Maintenance & Improvement	78,990	28,500	17,125	20,000	144,615
Less than 20,000cy Improvement only <sup>2</sup>	400	400	400	400	1,600
Less than 20,000 cy Maintenance only	148,815	69,650	30,625	21,865	270,955
<i>Subtotal</i>	<i>644,329</i>	<i>234,550</i>	<i>142,650</i>	<i>91,785</i>	<i>1,113,314</i>
<b>Public Non-Federal Facilities</b>					
Maintenance & Improvement	1,882,780	223,300	195,000	150,500	2,451,580
Improvement only	0	0	0	0	0
Maintenance only	829,935	223,300	226,150	211,300	1,490,685
<i>Subtotal</i>	<i>2,712,715</i>	<i>446,600</i>	<i>421,150</i>	<i>361,800</i>	<i>3,942,265</i>
<b>Total Non-Federal Facilities</b>	<b>3,357,044</b>	<b>681,150</b>	<b>563,800</b>	<b>453,585</b>	<b>5,055,579</b>
<b>Federal Navigation Projects</b>					
<b>Total Federal Projects<sup>3</sup></b>	<b>1,303,700</b>	<b>1,468,200</b>	<b>63,200</b>	<b>880,750</b>	<b>3,715,850</b>
<b>TOTAL (cy)</b>	<b>4,660,744</b>	<b>2,149,350</b>	<b>627,000</b>	<b>1,334,335</b>	<b>8,771,429</b>
<b>Quonset Point/Davisville Basin<sup>4</sup></b>	<b>4,411,700</b>	<b>4,411,700</b>	<b>0</b>	<b>0</b>	<b>8,823,400</b>
<b>Estimated Maximum Total</b>	<b>9,072,444</b>	<b>6,561,050</b>	<b>627,000</b>	<b>1,334,335</b>	<b>17,594,829</b>

<sup>1</sup> Volumes in this section do not include known surveyed non-Federal facilities that will incorporate beneficial use of dredged material, such as beach nourishment, which total 1,200,000 cubic yards.

<sup>2</sup> Only one respondent listed improvement dredging. That respondent anticipated 400 cubic yards every five years.

<sup>3</sup> The total of Federal Navigation Projects does not include projects that will utilize beneficial use of dredged material, such as beach nourishment, which totals 919,500 cubic yards. Additionally, 1,783,500 cubic yards estimated for the New Bedford/Fairhaven Harbor Project is not included because the Corps has already established the material is unsuitable for offshore disposal.

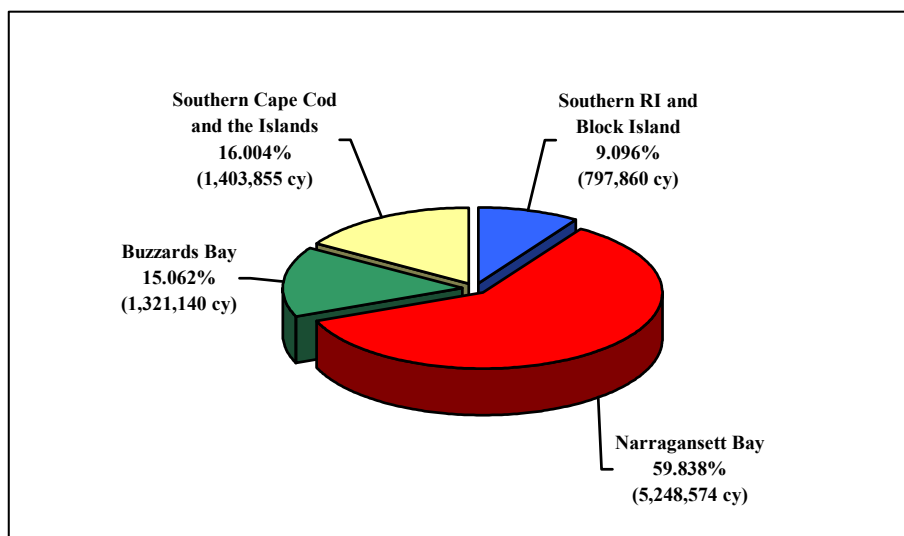
<sup>4</sup> Quonset Point/Davisville is excluded because the dredging associated with the proposed container port, between 8 and 14 million cubic yards, is not a Federal project and its realization is not known at this time.

A dredging needs study similar to this study was conducted in 1984 by SAIC (1985) for the Corps. The study projected future volumes of dredged material for the Rhode Island Sound Region between 1985 and 1995. SAIC surveyed non-Federal facilities in the region and received responses from 285 Rhode Island facilities and 163 Massachusetts facilities. The total projected volume for both Rhode Island and Massachusetts was 8.77 million cubic yards, over the 10-year period and 44.7 % of the respondents anticipated dredging within the 10 years. Historic permit data from the Corps analyzed for the current

study indicates that only 2.4 million cubic yards was dredged between 1983 and 2002 and estimates nearly 9 million cubic yards of dredged material will be generated in the next 20 years. Taken together the two projections indicate the region needs to make up an estimated 6.37 million cubic yards as well as anticipate an additional 3 million cubic yards in the next 20 years.

In the current study, most respondents (94.4%) anticipate dredging within 20 years. For the 1985 and 1995 projection, the majority of the facilities responded that dredging would be for improvement of existing facilities (64.9% of Rhode Island non-Federal facilities and 87.3% of Massachusetts non-Federal facilities). The current study indicates that dredging will be mostly for maintenance or a combination of improvement and maintenance.

Figure 3 shows the distribution of the 20-year projections of dredged material volumes by dredging center. The Southern Rhode Island and Block Island Dredging Center has the smallest proportion (9.1%) and the Narragansett Bay Dredging Center has the largest (59.9%, which does not include dredging associated with the proposed construction of a container port at Quonset Point/Davisville).



**Figure 3. Dredging Centers in the Rhode Island and Southeastern Massachusetts Region: Percent of Total Volume of Dredged Material for the Region Projected Between 2002 and 2021 (8,771,429 cy).**

More specifically, Figure 4 shows the range of volumes of dredged material by municipality, or dredging location, within a center. The volumes represent the total for both Federal navigation projects and non-Federal facilities. Throughout the entire study area, most locations project volumes less than 200,000 cubic yards literature searches, project maps, and Corps project managers over the next 20 years. The Narragansett Bay Dredging Center has the highest concentration of locations projecting more than 500,000 cubic yards of material to be dredged, two of which anticipate dredging 1 to 2 million cubic yards of material each.

The Southern Cape Cod and the Islands Dredging Center has one location with a projected dredging volume of nearly 2.6 million cubic yards. In the past, much of the dredged material from this location has consisted of sand which has been used for beach nourishment. For this reason, approximately half of the total volume (1.2 million cubic yards) was excluded from the final total disposal estimates. Consistency with Massachusetts beneficial use requirement (that such material be used for beach nourishment) makes it unlikely that this material would go to an open water site.



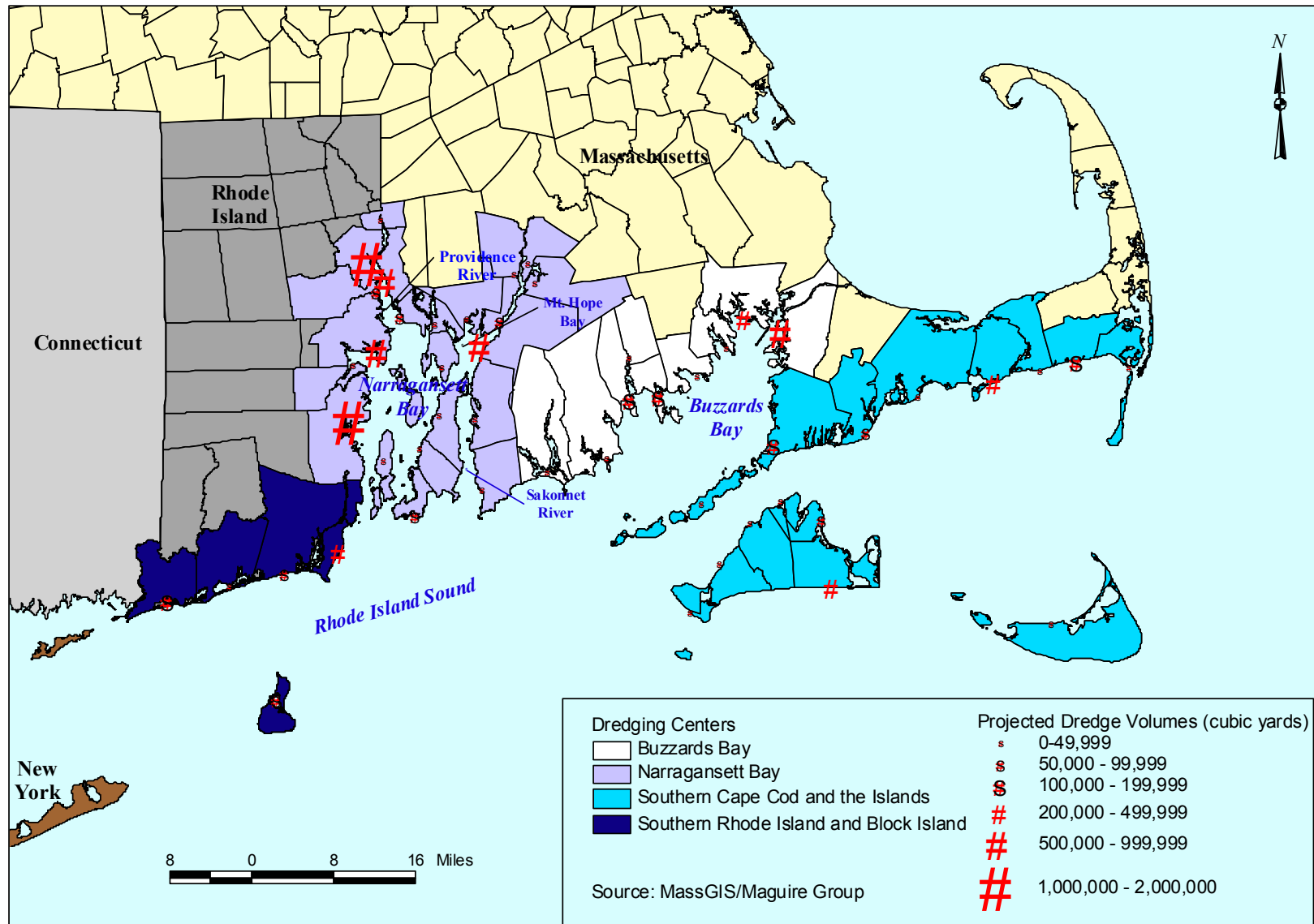


Figure 4. RI Region Long-Term Dredged Material Disposal Site Evaluation Project - Dredging Needs Study - Projected 20-year Volumes of Dredged Material by Municipality.



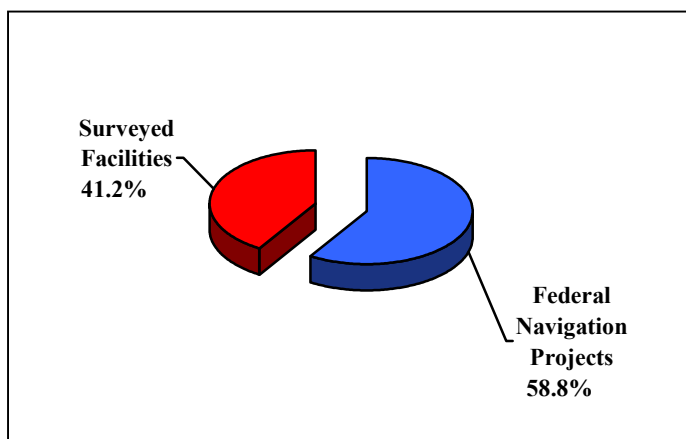
#### 4.1 Southern Rhode Island and Block Island Dredging Center

This center encompasses the Rhode Island coast from Westerly to Narragansett and includes New Shoreham (Block Island). This area is the smallest of the four dredging centers, both in volume of future dredged material, 779,953 cubic yards, and number of facilities surveyed, 68 (Table 3). The area has two Federal navigation projects not using beach nourishment as a disposal method: 1. the Pawcatuck River, Little Narragansett Bay, and Watch Hill Cove area in Westerly and 2. Point Judith Harbor of Refuge and Pond in Narragansett. These projects account for 58.8% of the total volume of projected dredged material for this dredging center (Figure 5). There were no non-Federal facilities that indicated the need for improvement dredging only. Eleven non-Federal facilities indicated the need for both improvement and maintenance dredging, totaling 240,045 cubic yards of material.

**Table 3. Survey Results and Federal Navigation Projects for Southern Rhode Island and Block Island Dredging Center.**

	2002-2006 (cubic yards)	2007-2011 (cubic yards)	2012-2016 (cubic yards)	2017-2021 (cubic yards)	20-year total (cubic yards)
<b><i>Private Non-Federal Facilities</i></b>					
20,000 cy <sup>1</sup> or more Maintenance & Improvement	99,000	30,000	50,000	25,020	204,020
20,000 cy or more Improvement only	0	0	0	0	0
20,000 cy or more Maintenance only	0	0	0	0	0
Less than 20,000cy Maintenance & Improvement	18,500	14,000	2,525	1,000	36,025
Less than 20,000cy Improvement only	0	0	0	0	0
Less than 20,000cy Maintenance only	39,900	24,600	3,650	18,465	86,615
<i>Subtotal</i>	<i>157,400</i>	<i>68,600</i>	<i>56,175</i>	<i>44,485</i>	<i>326,660</i>
<b><i>Public Non-Federal Facilities</i></b>					
Maintenance & Improvement	0	0	0	0	0
Improvement only	0	0	0	0	0
Maintenance only	0	1,700	0	0	1,700
<i>Subtotal</i>	<i>0</i>	<i>1,700</i>	<i>0</i>	<i>0</i>	<i>1,700</i>
<b>Total Non-Federal Facilities</b>	<b>157,400</b>	<b>70,300</b>	<b>56,175</b>	<b>44,485</b>	<b>328,360</b>
<b>Total Federal Projects<sup>1</sup></b>	<b>136,500</b>	<b>212,000</b>	<b>45,500</b>	<b>75,500</b>	<b>469,500</b>
<b>Total (cy)</b>	<b>293,900</b>	<b>282,300</b>	<b>101,675</b>	<b>119,985</b>	<b>797,860</b>

<sup>1</sup> The total volume for Federal Navigation Projects does not include projects that will utilize beneficial use of dredged material, such as beach nourishment, which total 176,500 cubic yards in this Dredging Center.



**Figure 5. Southern Rhode Island and Block Island Dredging Center: Percentages of Projected Dredged Material Volume from 2002 to 2021 by Non-Federal Facilities and Federal Navigation Projects (2002).**

#### **4.2 Narragansett Bay Dredging Center**

This area includes all the facilities within Narragansett Bay, including those on the Providence River, Mount Hope Bay and the Sakonnet River. The area has the highest number of non-Federal facilities surveyed, 181 (Table 4). There are 16 Federal navigation projects in this area. In addition, the feasibility of a container port at Quonset Point/Davisville in North Kingstown, Rhode Island is being considered. It is estimated that the volume of dredging for this project, if carried forward, may range from 8 to 14 million cubic yards, which is expected to occur within the first 10 years of the study period.

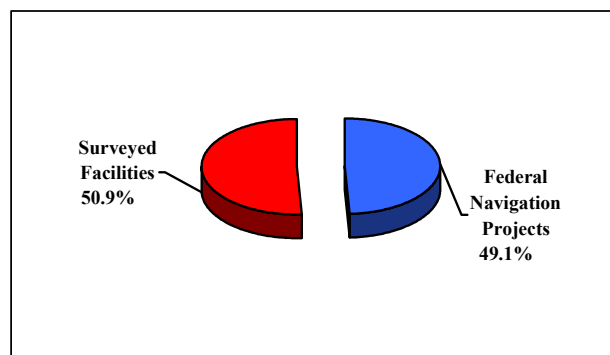
The total volume of dredged material from this dredging center over 20 years is estimated at about 5 million cubic yards without the ports of Quonset Point and Davisville (Table 4). This volume is almost equally divided between Federal navigation projects and non-Federal facilities (Figure 6). Only one non-Federal facility indicated that dredging activities would be for improvement purpose and estimated a total of 1,600 cubic yards. Because it is extremely unlikely that a facility would expand in the first five years, the volume was spread over 20 years. Eight facilities anticipate both improvement and maintenance dredging, totaling 1,693,500 cubic yards of material. The remaining balance of dredged material disposal needs is strictly for maintenance purposes.

**Table 4. Survey Results and Federal Navigation Projects for Narragansett Bay Dredging Center.**

	2002-2006 (cubic yards)	2007-2011 (cubic yards)	2012-2016 (cubic yards)	2017-2021 (cubic yards)	20-year total (cubic yards)
<b>Private Non-Federal Facilities</b>					
20,000 cy <sup>1</sup> or more Maintenance & Improvement	30,000	60,000	0	0	90,000
20,000 cy or more Improvement only	0	0	0	0	0
20,000 cy or more Maintenance only	257,124	12,000	52,000	12,000	333,124
Less than 20,000cy Maintenance & Improvement	31,500	0	0	12,000	43,500
Less than 20,000cy Improvement only	400	400	400	400	1,600
Less than 20,000cy Maintenance only	49,500	32,950	22,100	2,700	107,250
<i>Subtotal</i>	<i>368,524</i>	<i>105,350</i>	<i>74,500</i>	<i>27,100</i>	<i>575,474</i>
<b>Public Non-Federal Facilities</b>					
Maintenance & Improvement	1,560,000	0	0	0	1,560,000
Improvement only	0	0	0	0	0
Maintenance only	483,050	27,700	5,000	20,000	535,750
<i>Subtotal</i>	<i>2,043,050</i>	<i>27,700</i>	<i>5,000</i>	<i>20,000</i>	<i>2,095,750</i>
<b>Total Non-Federal Facilities</b>	<b>2,411,574</b>	<b>133,050</b>	<b>79,500</b>	<b>47,100</b>	<b>2,671,224</b>
<b>Total Federal Navigation Projects<sup>1</sup></b>	<b>1,098,200</b>	<b>956,200</b>	<b>17,700</b>	<b>505,250</b>	<b>2,577,350</b>
<b>Total</b>	<b>3,509,774</b>	<b>1,089,250</b>	<b>97,200</b>	<b>552,350</b>	<b>5,248,574</b>
<b>Quonset Point/ Davisville Basin<sup>2</sup></b>	<b>4,411,700</b>	<b>4,411,700</b>	<b>0</b>	<b>0</b>	<b>8,823,400</b>
<b>Total</b>	<b>7,921,474</b>	<b>5,500,950</b>	<b>97,200</b>	<b>552,350</b>	<b>14,071,974</b>

<sup>1</sup> The total of Federal Navigation Projects does not include projects that will utilize beneficial use of dredged material, such as beach nourishment. There are no such projects in this Dredging Center.

<sup>2</sup> Quonset Point/Davisville is excluded because the dredging associated with the proposed container port, between 8 and 14 million cubic yards, is not a Federal project and its realization is not known at this time.



**Figure 6. Narragansett Bay Dredging Center: Percentages of Projected Dredged Material Volume from 2002 to 2021 by Non-Federal Facilities and Federal Navigation Projects, Not Including the Ports of Quonset Point and Davisville.**

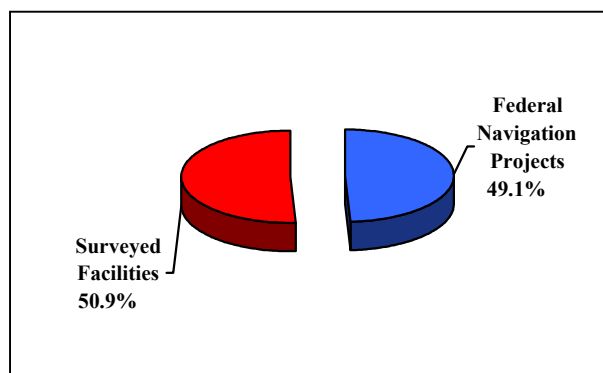
### 4.3 Buzzards Bay Dredging Center

This area begins at the Massachusetts/Rhode Island border at Westport, Massachusetts, and continues into Buzzards Bay to Bourne, Massachusetts. The 20-year total volume of dredged material projected from this center is approximately 1.3 million cubic yards (Table 5). There are 4 Federal navigation projects in this area including Buttermilk Bay Channel, Cape Cod Canal, Onset Bay, and Wareham Harbor. New Bedford and Fairhaven Harbor were not included in this total because the Corps considers the dredged material unsuitable for unconfined open water disposal. The volume of projected dredged material in this dredging center is almost evenly split between Federal navigation projects and the non-Federal facilities (Figure 7). There were no non-Federal facilities that indicate dredging is needed for improvement only. Responses from 11 facilities state that dredging is needed for both improvement and maintenance, totaling 497,370 cubic yards.

**Table 5. Survey Results and Federal Navigation Projects for Buzzards Bay Dredging Center.**

	2002-2006 (cubic yards)	2007-2011 (cubic yards)	2012-2016 (cubic yards)	2017-2021 (cubic yards)	20-year total (cubic yards)
<b>Private Non-Federal Facilities</b>					
20,000 cy or more Maintenance & Improvement	50,000	2,500	2,500	2,500	57,500
20,000 cy or more Improvement only	0	0	0	0	0
20,000 cy or more Maintenance only	0	0	0	0	0
Less than 20,000cy Maintenance & Improvement	20,790	12,500	12,600	2,000	47,890
Less than 20,000cy Improvement only	0	0	0	0	0
Less than 20,000cy Maintenance only	20,370	15,000	3,000	0	38,370
<i>Subtotal</i>	<i>91,160</i>	<i>30,000</i>	<i>18,100</i>	<i>4,500</i>	<i>143,760</i>
<b>Public Non-Federal Facilities</b>					
Maintenance & Improvement	147,780	128,300	80,000	55,500	411,580
Improvement only	0	0	0	0	0
Maintenance only	70,000	13,000	21,000	13,000	117,000
<i>Subtotal</i>	<i>217,780</i>	<i>141,300</i>	<i>101,000</i>	<i>68,500</i>	<i>528,580</i>
<b>Total Non-Federal Facilities</b>	<b>308,940</b>	<b>171,300</b>	<b>119,100</b>	<b>73,000</b>	<b>672,340</b>
<b>Total Federal Navigation Projects<sup>1</sup></b>	<b>48,800</b>	<b>300,000</b>	<b>0</b>	<b>300,000</b>	<b>648,800</b>
<b>Total</b>	<b>357,740</b>	<b>471,300</b>	<b>119,100</b>	<b>373,000</b>	<b>1,321,140</b>

<sup>1</sup> The total volume for Federal Navigation Projects does not include projects that will utilize beneficial use of dredged material, such as beach nourishment, which total 14,000 cubic yards in this Dredging Center. Additionally, the New Bedford/Fairhaven Harbor Project, which totals 1,783,500 cubic yards, is not included because the Corps has already established the material is unsuitable for offshore disposal.



**Figure 7. Buzzards Bay Dredging Center: Percentages of Projected Dredged Material Volume from 2002 to 2021 by Non-Federal Facilities and Federal Navigation Projects.**

#### **4.4 Southern Cape Cod and the Islands Dredging Center**

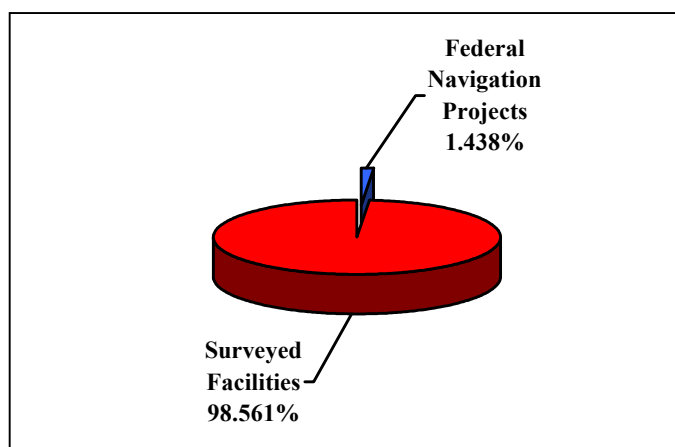
This area contains the southern shore of Cape Cod from Grosnold to Chatham and the islands of Martha's Vineyard and Nantucket. The 20-year total volume of dredged material projected for this center is over 2 million cubic yards (Table 6). Half of this is found in Chatham (see Figure 4) where 1.2 million cubic yards of sandy material from public non-Federal projects will most likely be used for beach nourishment. This volume is therefore not included in the total disposal volumes estimated for Southern Cape Cod and the Islands. There are three Federal dredging projects in this area identified by the Corps that are not using dredged material for beach nourishment: Falmouth Harbor, Vineyard Haven, and Woods Hole Channel. The future maintenance associated with these projects totals 20,200 cubic yards of dredged material, or 1.4% of the total quantity for the dredging center (Figure 8). Two non-Federal facilities indicated that dredging is needed for improvement but did not specify a volume of material. Eight facilities indicated that their future dredging would consist of both improvement and maintenance activities. The amount of material requiring disposal would total 591,000 cubic yards from these eight facilities.

**Table 6. Survey Results and Federal Navigation Projects for Southern Cape Cod and the Islands Dredging Center.**

	2002-2006 (cubic yards)	2007-2011 (cubic yards)	2012-2016 (cubic yards)	2017-2021 (cubic yards)	20-year total (cubic yards)
<b>Private Non-Federal Facilities</b>					
20,000 cy or more Maintenance & Improvement	0	0	0	0	0
20,000 cy or more Improvement only	0	0	0	0	0
20,000 cy or more Maintenance only	30,000	10,000	10,000	10,000	60,000
Less than 20,000cy Maintenance & Improvement	8,200	2,000	2,000	5,000	17,200
Less than 20,000cy Improvement only	0	0	0	0	0
Less than 20,000cy Maintenance only	36,830	10,000	2,525	1,000	50,355
<i>Subtotal</i>	<i>75,030</i>	<i>22,000</i>	<i>14,525</i>	<i>16,000</i>	<i>127,555</i>
<b>Public Facilities</b>					
Both	141,500	95,000	95,000	95,000	426,500
Improvement	0	0	0	0	0
Maintenance	262,600	189,500	199,500	178,000	829,600
<i>Subtotal</i>	<i>404,100</i>	<i>284,500</i>	<i>294,500</i>	<i>273,000</i>	<i>1,256,100</i>
<b>Total Non-Federal Facilities<sup>1</sup></b>	<b>479,130</b>	<b>306,500</b>	<b>309,025</b>	<b>289,000</b>	<b>1,383,655</b>
<b>Total Federal Navigation Projects<sup>2</sup></b>	<b>20,200</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>20,200</b>
<b>Total</b>	<b>499,330</b>	<b>306,500</b>	<b>309,025</b>	<b>289,000</b>	<b>1,403,855</b>

<sup>1</sup> The total volume does not include known surveyed non-Federal facilities that will incorporate beneficial use of dredged material, such as beach nourishment, which is estimated at 1,200,000 cubic yards in this Dredging Center.

<sup>2</sup> The total volume for Federal Navigation Projects does not include projects that will utilize beneficial use of dredged material, such as beach nourishment, which totals 729,000 cubic yards in this Dredging Center.



**Figure 8. Southern Cape Cod and the Islands Dredging Center: Percentages of Projected Dredged Material Volume from 2002 to 2021 by Non-Federal Facilities and Federal Navigation Projects.**

## 4.5 Economic Need

A component of the questionnaire sent to navigation dependent facilities asked questions to better understand the potential economic impact on facilities if dredging did not occur. Some questions required respondents to express in their own words specific impacts and problems associated with the lack of dredging. However, questions 8 and 9 on the survey (Appendix A) required a “yes” or “no” answer and provided information on the respondents’ anticipated economic impact without violating confidentiality obligations. Tables 7 and 8 summarize the responses. Most facilities, both public (73.3%) and private (83.1%), anticipate an economic impact if dredging would not occur at their site. Two thirds (66.7%) of public facilities and nearly three quarters (73.7%) of private facilities have experienced a variety of problems due to lack of dredging. Identified problems include limited access in and out of facility, vessels running aground, limitation of service provided by facility, and other navigational hazards.

**Table 7. Responses to Question 8 of Questionnaire for Dredging Needs Study Survey of Navigation Dependent Facilities.**

*Question: Would additional and/or more frequent dredging contribute to the economic viability of facility?*

	<b>Question 8 Responses</b>								
	<b>Yes</b>	<b>Yes (%)</b>	<b>No</b>	<b>No (%)</b>	<b>Don't Know</b>	<b>Don't Know (%)</b>	<b>Left Blank</b>	<b>Left Blank (%)</b>	<b>Total</b>
<b>Public Facilities</b>	44	73.3%	6	10.0%	2	3.3%	8	13.3%	60
<b>Private Facilities</b>	98	83.1%	9	7.6%	9	7.6%	2	1.7%	118
<b>Total</b>	142	79.78%	15	8.43%	11	6.18%	10	5.62%	178

**Table 8. Responses to Question 9 of Questionnaire for Dredging Needs Study Survey of Navigation Dependent Facilities.**

*Question: Have you had any problems that you are aware of due to the lack of dredging?*

	<b>Question 9 Responses</b>						
	<b>Yes</b>	<b>Yes (%)</b>	<b>No</b>	<b>No (%)</b>	<b>Blank</b>	<b>Blank (%)</b>	<b>Total</b>
<b>Public Facilities</b>	40	66.7%	6	10.0%	14	23.3%	60
<b>Private Facilities</b>	87	73.7%	12	10.2%	19	16.1%	118
<b>Total</b>	127	71.4%	18	10.1%	33	18.5%	178

## 5.0 SUMMARY

The future dredging needs of the Rhode Island and southeastern Massachusetts region presented in this study were determined from the responses received from the non-Federal navigation dependent facilities in the study area, projections of dredged material for future Federal navigation projects, and historic dredging activities of the region. Responses were received from 178 (39.6%) of the facilities that received a questionnaire. Reasons for not responding to the survey included two primary factors: 1) the May period began the busy season for the facilities, which made it difficult to participate in the survey

and 2) some government-managed facilities had to wait for governing bodies to review the questionnaire before responding, which was not done before the deadline.

The four dredging centers established in the region are projected to produce almost 10 million cubic yards of dredged material within the next 20 years. Approximately 5.1 million cubic yards (57.6%) is allocated to the non-Federal facilities, or non-Federal dredging (Table 9). Most of the dredging need is for maintenance purposes or a combination of improvement and maintenance (See Table 2). Nearly half of the dredging activity (4.7 million cubic yards) is anticipated within the first five years of the projection period and assumes acceptable disposal sites are available. Because the region has not had a full range of dredged material disposal options in the past several years and there is a backlog of dredging need, projections based on historic data may be low. Thus, a higher volume may be anticipated in the study area within the 20-year planning period.

A majority of the projected dredged material will be from the Narragansett Bay Dredging Center, totaling approximately 5.3 million cubic yards as reported by 59 non-Federal facilities and 16 Federal navigation projects. The smallest center is Southern Rhode Island and Block Island. This area anticipates 779,000 cubic yards. Volumes of dredged material in three of the four dredging centers is almost evenly split between Federal navigation projects in need of a disposal site and surveyed non-Federal facilities. Federal projects identified by the Corps in the Southern Cape Cod and the Islands Dredging Center that use beach nourishment for disposal do not require an ocean disposal site and are not included in the totals presented in this report. However, they are included in Appendix D. Quonset Point/Davisville is excluded because the dredging associated with the proposed container port, between 8 and 14 million cubic yards, is not a Federal project and its realization is not known at this time.

**Table 9. Summary of Total Federal and Non-Federal Dredging Needs and Future Quantities of Dredged Material for the Rhode Island and Southeastern Massachusetts Region by 2021.**

	Facilities Surveyed	Responses Received	2002-2006 (cubic yards)	2007-2011 (cubic yards)	2012-2016 (cubic yards)	2017-2021 (cubic yards)	20-year Total (cubic yards)
<b>Federal Projects<sup>1</sup></b>			1,303,700	1,468,200	63,200	880,750	3,715,850
<b>Non-Federal Facilities<sup>2</sup></b>	450	178	3,357,044	681,150	563,800	453,585	5,055,579
<b>Subtotal</b>			<b>4,660,744</b>	<b>2,149,350</b>	<b>627,000</b>	<b>1,334,335</b>	<b>8,771,429</b>
<b>Quonset Point/ Davisville Basin<sup>3</sup></b>			4,411,700	4,411,700	0	0	8,823,400
<b>Totals</b>			9,072,444	6,561,050	627,000	1,334,335	17,594,829

<sup>1</sup> The total volume for the Federal Navigation Projects does not include projects that will utilize beneficial use of dredged material, such as beach nourishment. This totals 919,500 cubic yards. Additionally, the New Bedford/Fairhaven Harbor Project, which totals 1,783,500 cubic yards, is not included because the Corps has already established the material is unsuitable for offshore disposal.

<sup>2</sup> The total volume estimate does not include known surveyed non-Federal facilities that will incorporate beneficial use of dredged material, such as beach nourishment. This is estimated at 1,200,000 cubic yards.

<sup>3</sup> Quonset Point/Davisville is excluded because the dredging associated with the proposed container port, between 8 and 14 million cubic yards, is not a Federal project and its realization is not known at this time.

Although this report focuses on dredging needs of the study area, the questionnaire addressed other issues such as possible economic impacts on local facilities if dredging did not occur. Most municipalities raise concerns over costs and the need for Federal assistance in maintenance dredging. Both public and private facilities state that waterways are becoming less navigable at low tide and vessels rely on high tide to leave and enter facilities, which increases congestion during peak times. Additional comments indicate the lack of dredging may lead to reduced dockage space and loss of rental slips, limiting the size of



recreation and commercial vessels serviced at facilities. Survey respondents see the lack of dredging as having a negative impact on the economic vitality of public and private facilities.

## 6.0 REFERENCES

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USEPA and USACOE. October 2001. Long Island Sound Dredged Material Disposal Environmental Impact Statement Economic Survey Appendix C: Navigation Dependent Facilities.

## **APPENDIX A**

### **Survey Packet**

April 17, 2002

RE: **Survey of Navigation Dependent Facilities**

Dear Marine Facility Owner/Operator:

**The purpose of this letter is to request your assistance in developing information necessary to estimate the need for dredging in your area by completing the attached questionnaire. The Army Corps of Engineers and the U. S. Environmental Protection Agency (EPA) are preparing an Environmental Impact Statement (EIS) for dredged material disposal options for the Rhode Island Region. As part of preparing the EIS, dredged material disposal options and their related economic impacts will be evaluated.**

The Corps of Engineers has contracted with a private consulting firm, to perform a detailed survey of all Federal, state, and private dredging areas in the Rhode Island Region study area. The primary purpose of the survey is to identify the volumes and locations of dredging that would likely occur in the next 20 years if a disposal site were readily available. Another purpose of the survey is to gather information to determine the economic impact on facilities if no disposal site is designated.

**Your participation in this survey is completely voluntary.** In addition, your responses will be confidential. Only summaries of the results will be published.

Thank you very much for your valuable assistance. For questions about this questionnaire and its processing, please contact Dori Bertram at 1-800-899-9219. For questions regarding the use of your responses, please contact Richard Ring, Corps of Engineers, at (978) 318-8643.

Encls. (Questionnaire)

SURVEY OF NAVIGATION DEPENDENT FACILITIES  
RHODE ISLAND REGION

(Questionnaire)

OMB 0710-0001

Expires: 30 June 2002

Public reporting burden for this collection of information is estimated to average 20 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collected information. Respondents should be aware that, notwithstanding any other provision of law, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a current valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, Virginia, 22202-4302. Please DO NOT RETURN your questionnaire to this address.

**Questionnaire for  
Dredging Needs Study  
Survey of Navigation Dependent Facilities  
Rhode Island Region**

1. Name and Address of Facility (Business Name):

attach mailing label

2. Your name and Phone number (include your title/position with the facility):

Name \_\_\_\_\_, Title \_\_\_\_\_,  
Phone No. \_\_\_\_\_

3. Ownership Status (Please Check One)

☐ Public  
☐ Private

4. Nature of Facility:

☐ Marina  
☐ Yacht Club  
☐ Deep-Draft Terminal  
☐ Commercial Fishing Wharf/Seafood Processor  
☐ Municipal/Public Facility  
☐ Other (please describe) \_\_\_\_\_

5. Please mark the approximate location of your facility on the map at the back of this questionnaire.

6. Please provide the following information about your business:

Number of employees: \_\_\_\_\_ part-time or seasonal, \_\_\_\_\_ full-time

7. Has your facility been dredged in the past 20 years? \_\_\_\_\_

If yes, when was the last time your facility was dredged? \_\_\_\_\_ (year is OK)

What quantity was dredged? \_\_\_\_\_ cubic yards

What was the unit cost? \$ \_\_\_\_\_ per cubic yard?

If not available, total cost \$ \_\_\_\_\_

(Cost, whether unit or total, should include testing and permitting and associated costs)

Disposal site(s) used for dredged material? \_\_\_\_\_

8. Would additional and/or more frequent dredging contribute to the economic viability of your facility?

☐ Yes  
☐ No  
☐ Don't Know

9. Have you had any problems that you are aware of due to lack of dredging?

If yes, please describe: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. If there were a readily available disposal site in Rhode Island Sound off the Rhode Island and/or Southeastern Massachusetts coastlines, would you dredge at your facility in the next 20 years?

☐ Yes  
☐ No  
☐ Don't Know

11. If you answered Yes to #10, would the dredging be for maintenance purposes, expansion, or both?

☐ Maintenance  
☐ Expansion  
☐ Both

12. If you answered Yes to #10, please estimate approximately when and what volume of material you would dredge.

2002-2006 (next 5 years)	_____ cubic yards
2007-20011 (6 to 10 years)	_____ cubic yards
2012-2016 (11 to 15 years)	_____ cubic yards
2017-2021 (16 to 20 years)	_____ cubic yards

What type of material? (sand, gravel, silt) \_\_\_\_\_

13. What cost of dredging (\$ per cubic yard) do you consider affordable?

\$ \_\_\_\_\_ per cubic yard

14. If you were unable to dredge your facility, how would this impact your business?

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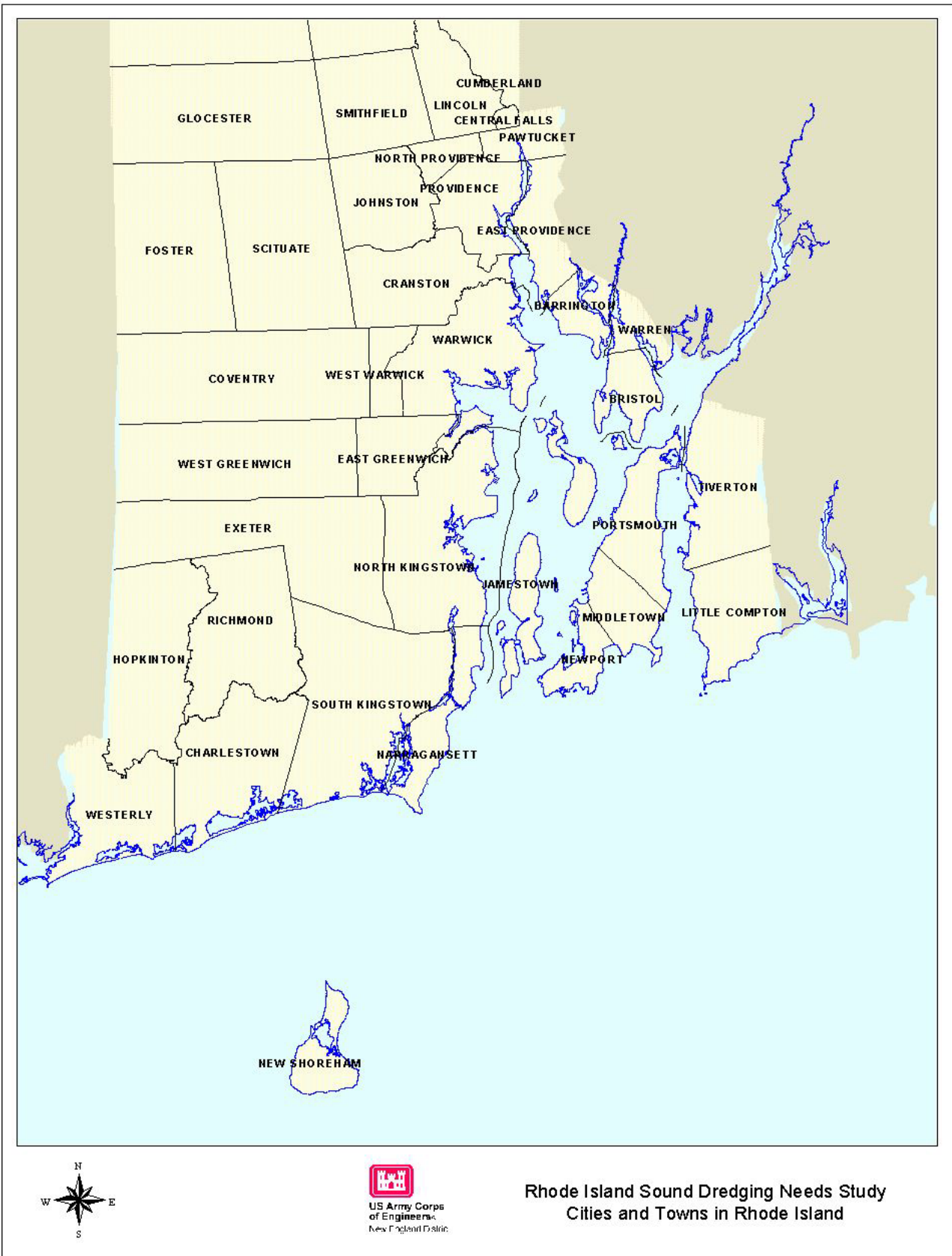
We appreciate your time and assistance in completing this survey. Your efforts will greatly aid the Corps of Engineers and the EPA in determining future dredging needs and evaluating economic impacts of alternative dredged material disposal alternatives for Rhode Island Sound.

Additional Comments \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Thank you for your assistance.

Please use the enclosed envelope to return the completed questionnaire or fax it to:

Dori Bertram, Maguire Group Inc., 225 Foxborough Boulevard, Foxborough, MA 02035 – 508-543-5157



April 17, 2002

RE: **Survey of Navigation Dependent Facilities**

Dear Marine Facility Owner/Operator:

**The purpose of this letter is to request your assistance in developing information necessary to estimate the need for dredging in your area by completing the attached questionnaire. The Army Corps of Engineers and the U. S. Environmental Protection Agency (EPA) are preparing an Environmental Impact Statement (EIS) for dredged material disposal options for Southeastern Massachusetts and the Rhode Island Sound Region. As part of preparing the EIS, dredged material disposal options and their related economic impacts will be evaluated.**

The Army Corps of Engineers has contracted with a private consulting firm, to perform a detailed survey of all Federal, state, and private dredging areas in the Southeastern Massachusetts and the Rhode Island Sound Region study area. The primary purpose of the survey is to identify the volumes and locations of dredging that would likely occur in the next 20 years if a disposal site were readily available. Another purpose of the survey is to gather information to determine the economic impact on facilities if no disposal site is designated.

**Your participation in this survey is completely voluntary.** In addition, your responses will be confidential. Only summaries of the results will be published.

Thank you very much for your valuable assistance. For questions about the attached questionnaire and its processing, please contact Doris Bertram at 1-800-899-9219. For questions regarding the use of your responses, please contact Richard Ring, Corps of Engineers, at (978) 318-8643.

Encls. (Questionnaire)



SURVEY OF NAVIGATION DEPENDENT FACILITIES  
SOUTHEASTERN MASSACHUSETTS

(Questionnaire)

OMB 0710-0001

Expires: 30 June 2002

Public reporting burden for this collection of information is estimated to average 20 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collected information. Respondents should be aware that, notwithstanding any other provision of law, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a current valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, Virginia, 22202-4302. Please DO NOT RETURN your questionnaire to this address.

**Questionnaire for  
Dredging Needs Study  
Survey of Navigation Dependent Facilities  
Southeastern Massachusetts**

1. Name and Address of Facility (Business Name):

attach mailing label

2. Your name and Phone number (include your title/position with the facility):

Name \_\_\_\_\_, Title \_\_\_\_\_,  
Phone No. \_\_\_\_\_

3. Ownership Status (Please Check One)

☐ Public  
☐ Private

4. Nature of Facility:

☐ Marina  
☐ Yacht Club  
☐ Deep-Draft Terminal  
☐ Commercial Fishing Wharf/Seafood Processor  
☐ Municipal/Public Facility  
☐ Other (please describe) \_\_\_\_\_

5. Please mark the approximate location of your facility on the map at the back of this questionnaire.

6. Please provide the following information about your business:

Number of employees: \_\_\_\_\_ part-time or seasonal, \_\_\_\_\_ full-time

7. Has your facility been dredged in the past 20 years? \_\_\_\_\_

If yes, when was the last time your facility was dredged? \_\_\_\_\_ (year is OK)

What quantity was dredged? \_\_\_\_\_ cubic yards

What was the unit cost? \$ \_\_\_\_\_ per cubic yard?

If not available, total cost \$ \_\_\_\_\_

(Cost, whether unit or total, should include testing and permitting and associated costs)

Disposal site(s) used for dredged material? \_\_\_\_\_

8. Would additional and/or more frequent dredging contribute to the economic viability of your facility?

☐ Yes  
☐ No  
☐ Don't Know

9. Have you had any problems that you are aware of due to lack of dredging?

If yes, please describe: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. If there were a readily available disposal site in Rhode Island Sound off the Rhode Island and/or Southeastern Massachusetts coastlines, would you dredge at your facility in the next 20 years?

☐ Yes  
☐ No  
☐ Don't Know

11. If you answered Yes to #10, would the dredging be for maintenance purposes, expansion, or both?

☐ Maintenance  
☐ Expansion  
☐ Both

12. If you answered Yes to #10, please estimate approximately when and what volume of material you would dredge.

2002-2006 (next 5 years)	_____ cubic yards
2007-20011 (6 to 10 years)	_____ cubic yards
2012-2016 (11 to 15 years)	_____ cubic yards
2017-2021 (16 to 20 years)	_____ cubic yards

What type of material? (sand, gravel, silt) \_\_\_\_\_

13. What cost of dredging (\$ per cubic yard) do you consider affordable?

\$ \_\_\_\_\_ per cubic yard

14. If you were unable to dredge your facility, how would this impact your business?

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We appreciate your time and assistance in completing this survey. Your efforts will greatly aid the Corps of Engineers and the EPA in determining future dredging needs and evaluating economic impacts of alternative dredged material disposal alternatives for Rhode Island Sound.

Additional Comments \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Thank you for your assistance.

Please use the enclosed envelope to return the completed questionnaire or send it to:  
Dori Bertram, Maguire Group Inc., 225 Foxborough Boulevard, Foxborough, MA 02035



## **APPENDIX B**

### **Fields in Database**

**RI Region Long-Term Dredged Material Disposal Site Evaluation Project**  
**Database Fields**  
**July 2002**

<b>Field</b>	<b>Description</b>
Code	Reminder telephone call code
Response	Did the facility respond to the questionnaire? (Y/N)
Facility	Facility name
Address	Facility address
Locality	Locality where the facility is found
Town	Town where the facility is found
County	County where the facility is found
State	State where the facility is found
Zip	Zip code where the facility is found
Date	Date the questionnaire was received from facility, date reminder telephone call was made, or date of telephone interview
Name	Name of contact
Title	Title of contact
Phone	Telephone number of contact
Fax	Fax number of contact
Ownership	Is the facility public or privately owned
Nature of Facility	Is the facility a marina, yacht club, deep-draft terminal, commercial fishing wharf/seafood processor, municipal/public facility or other
Part-time	How many part-time workers are employed at facility?
Full-time	How many full-time workers are employed at facility?
20 Years	Has the facility been dredged in the past 20 years?
Date	If yes, when was the last time facility dredged?
Quantity	What was the quantity dredged? (cubic yards)
Unit Cost	What was the unit cost? (per cubic yard)
Total Cost	In not available, what was the total cost?
Site	What was the disposal site used for dredged material?
Economic (#8)	Would additional and/or more frequent dredging contribute to the economic viability of facility?
Problems	Have you had any problems that you are aware of due to the lack of dredging? Please list.
Availability (#10)	If there were a readily available disposal site in RI Sound and/or Southeastern Massachusetts coastline, would you dredge at your facility in the next 20 years?
M or E (#11)	If yes, would the dredging be for maintenance, expansion or both?
2002-2006	Estimate volume of dredged material during specified years
2007-2011	Estimate volume of dredged material during specified years
2012-2016	Estimate volume of dredged material during specified years
2017-2021	Estimate volume of dredged material during specified years
Type	What type of material?
Affordable	What cost of dredging (\$ per cubic yard) do you consider affordable?
Impact	If you were unable to dredge you facility, how would this impact your business?
Comments	Additional comments

## **APPENDIX C**

### **Facilities Contact Information**

**RI Region Long-Term Dredged Material Disposal Site Evaluation Project**  
**Dredging Needs Study Survey Database**  
**Contact Information**

TOWN	LOCALITY	FACILITY	ADDRESS	NAME	TITLE
Massachusetts					
Barnstable	Hyannis	Anchor and Marine Ltd	133 Pleasant Street		
Barnstable	Centerville	Barnstable Harbormaster	1189 Phinney's Lane	Robert Burgmann	Town Engineer
Barnstable	Hyannis	Bradbury Marine Anchor	133 Pleasant Street		
Barnstable	Osterville	Chester A. Crosby and Sons	Bridge St		
Barnstable	Cotuit	Cotuit Mosquito Yacht Club	Old Shore Road, PO Box 614		
Barnstable	Osterville	Crosby Yacht Yard Inc	72 Crosby Circle	Richard B. Egan	President
Barnstable	Hyannis	Half Tide Marina	92 Barnstable Road		
Barnstable	Hyannis	Hyannis Marina	21 Arlington Street		
Barnstable	Hyannis Port	Hyannis Port Yacht Club	PO Box 128		
Barnstable	Hyannis	Hyannis Yacht Club	490 Ocean Street		
Barnstable	Hyannis	Hy-Line Cruises	Ocean Street Dock	Murray Scudder	Owner
Barnstable	Falmouth	Island Queen Ferry	Main Street		
Barnstable	Hyannis	Lewis Bay and Dockside Inn	141 School Street		
Barnstable	Osterville	Nauticus Marina	339 West Bay Road	Jay Christopher	Dockmaster
Barnstable	Osterville	Oyster Harbors Marine	722 Bridge St., PO Box 1059	Matthew Carftensen	Dockmaster
Barnstable	Marstons Mills	Prince's Cove Marina	235 Prince Ave		
Barnstable	Cotuit	Regatta Restaurant	4631 Falmouth Road		
Barnstable	Hyannis	Steamship Authority	30 Brooks Road		
Bourne	Pocasset	Barlow's Boat Yard	18 Wings Neck Road		
Bourne	Buzzards Bay	Bevans Marine	3236 Cranberry Highway		
Bourne	Buzzards Bay	Bourne Town Marina	1 Academy Ave.		
Bourne	Buzzards Bay	Bourne Harbormaster (Town of)	Town Hall, 24 Perry Avenue	Michael Litzal	Supervisor of Engineering
Bourne	Pocasset	Buzzards Yacht Club	PO Box 258		
Bourne	Monument Beach	Cape Marine	304 Shore Rd, PO Box 569		
Bourne	Buzzards Bay	Continental Marina	3336 Cranberry Highway		
Bourne	Buzzards Bay	Fries	3236 Cranberry Highway		
Bourne	Cataumet	Kingman Yacht Center, Inc.	1 Shipyard Lane, P.O. Box 408	Scott Zeien	President
Bourne	Buzzards Bay	Maco's Inc	Cranberry Hwy, PO Box 36	Richard J. Hopwood	President
Bourne	Buzzards Bay	Mass Maritime Sailing Club	Academy Drive	George A. Benway, III	Marine Director
Bourne	Monument Beach	Monument Beach Marina	Town Pier		
Bourne	Buzzards Bay	Onset Bay Corporation D.B.A. Onset Bay Marina	P.O. Box 780	Greg Glavin	General Manager



TOWN	LOCALITY	FACILITY	ADDRESS	NAME	TITLE
Bourne	Cataumet	Parker's Boat Yard, Inc	Redbrook Harbor Rd, PO Box 38	Bruce Parker	President/Owner
Bourne	Monument Beach	Perry's Boat Yard Inc	Hommock Pond Road, PO Box 1050		
Bourne	Cataumet	Cataumet Club	145 Scraggy Neck Road		
Chatham	Chatham	Town of Chatham	613 Stage Harbor Road	Ted Kian	Coastal Resource Director
Chatham	Chatham	USCG Station Chatham	Chatham Harbor		
Chatham	Chatham	Mill Pond Boat Yard	Eliphamets Lane		
Chatham	Chatham	Monomoy Yacht Club	80 Bridge St, PO Box 175		
Chatham	Chatham	Outermost Harbor Marine	83 Seagull Road	Frank Facchetti	Manager
Chatham	Chatham	Stage Harbor Marine	Bridge St., PO Box 646		
Chatham	Chatham	Stage Harbor Yacht Club	Champlain Road		
Dennis	West Dennis	Cape Cod Boats	Route 28		
Dennis	West Dennis	West Dennis Town Ramp	Ferry Street		
Dennis	South Dennis	Mayfair Boatyard	181 Old Mayfair Road, PO Box C		
Dennis	West Dennis	Bass River Marina	140 Main Street, PO Box 334	Bob Bratton	General Manager
Dennis	West Dennis	West Dennis Yacht Club	Loring Ave., PO Box 422		
Falmouth	West Falmouth	Chapoquoit Yacht Club	PO Box 453		
Falmouth	Falmouth	Davis Marine Park	180 Scranton Ave		
Falmouth	North Falmouth	Fiddler's Cove Marina	Fiddlers Cove Road		
Falmouth	East Falmouth	Green Pond Yacht Service Ltd	70 Green Harbor Road		
Falmouth	Falmouth	Harborside Marine & Sports	56 Scranton Avenue		
Falmouth	Megansett	Megansett Yacht Club	County Rd		
Falmouth	Woods Hole	Pinky's Marina	97 Water Street		
Falmouth	Woods Hole	Marine Operations	WHOI, Mail Stop #37	Jonathan Alberts	Marine Ops. Coordinator
Falmouth	Falmouth	Falmouth Harbormaster	59 Town Hall Square	Greg Frasier	Harbor Master
Falmouth	Woods Hole	USCG Station Woods Hole	Little Harbor	Mark Coady	Operation Petty Officer
Falmouth	Woods Hole	Woods Hole Oceanographic Institute	Mail Stop #37	Richard F. Dittlenger	VP for Marine Operations
Falmouth	Woods Hole	Woods Hole Eel Pond Pier	180 Scranton Ave		
Falmouth	Woods Hole	Woods Hole Marine	91 Water Street		
Falmouth	Woods Hole	Woods Hole Yacht Club	PO Box 265		
Falmouth	North Falmouth	Wild Harbor Yacht Club	386 Wild Harbor Road, PO Box 1078		
Falmouth	East Falmouth	Edward's Boat Yard	1209 East Falmouth Highway		
Falmouth	East Falmouth	Green Pond Tackle Inc	366 Menauhant Rd		
Falmouth	East Falmouth	Menauhant Yacht Club	PO Box 217	Robert W. Scott	Treasurer
Falmouth	East Falmouth	Waquoit Bay Yacht Club	PO Box 3434		
Falmouth	East Falmouth	West Marine at Green Pond	366 Menauhant Rd		

TOWN	LOCALITY	FACILITY	ADDRESS	NAME	TITLE
Falmouth	Falmouth	Barbour Marine Service	PO Box 602		
Falmouth	North Falmouth	Brewers Fiddler's Cove Marina	42 Fiddlers Cove Road	Allen Doppke	General Manager & V.P.
Falmouth	Falmouth	East Marine	89 Falmouth Heights Road, PO Box 610	Phil Wormelle	Owner
Falmouth	Falmouth	Falmouth Harbor Marina, Inc.	53 Falmouth Heights Rd	Henry F. Owens III	President
Falmouth	Falmouth	Falmouth Harbor Marina	180 Scranton Ave	Greg Frasier	Harbor Master
Falmouth	Falmouth	Falmouth Marine & Yachting Center	278 Scranton Ave.	Deborah Selleck	Dockmaster
Falmouth	Falmouth	Falmouth Pier 37	64 Scranton Avenue		
Falmouth	Falmouth	Falmouth Yacht Club	290 Clinton Avenue	Karen Lilly	Club Manager
Falmouth	Falmouth	MacDougalls' Cape Cod Marine S	145 Falmouth Heights Rd		
Falmouth	Falmouth	Marine Store/Gun & Tackle	56 Scranton Ave		
Falmouth	Falmouth	Quissett Harbor Boat Yard	32 Quissett Harbor Rd., PO Box 46		
Falmouth	Falmouth	Quissett Yacht Club	PO Box 681, 71 Quissett Harbor Rd		
Falmouth	Falmouth	Woods Hole Boat Sales	227 Clinton Avenue		
Harwich	Harwich Port	Allen Harbor Marine Service	335 Lower County Rd		
Harwich	Harwich Port	Harwich Port Boat Works Inc	Harbor Road, Wychmere Harbor, PO Box 218		
Harwich	Harwich	Harwich Port Landing	PO Box 207		
Harwich	Harwich Port	Saquatucket Municipal Marina	RT 28, Box 207	Tom Leach	Harbor Master
Harwich	Harwich Port	Stone Horse Yacht Club	PO Box 101		
Harwich	Harwich Port	Thompson's Clam Bar	Mill Road		
Mashpee	Mashpee	Mashpee Harbormaster	PO Box 554	Perry Ellis	Harbor Master
Mashpee	Mashpee	Little River Boatyard Inc	15 Riverside Rd., Seconsett Island		
Mashpee	Mashpee	New Seabury Marina	Drawer AA	Christopher Burden	Owners agent
West Chatham	West Chatham	Chatham Yacht Basin	Barn Hill Road, PO Box 1248	David Oppenheim	Owner
West Chatham	West Chatham	Oyster River Boat Yard	Barn Hill Lane, PO Box 521	Richard Berner	Owner
Yarmouth	Yarmouth	Bass River Beach Ramp	597 Forest Avenue		
Yarmouth	Bass River	Bass River Yacht Club	Pleasant Street		
Yarmouth	Yarmouth	Yarmouth Harbormaster	597 Forest Avenue	Karl VonHone	Director Town of Yarmouth
Yarmouth	Yarmouth	Yarmouth Harbormaster	597 Forest Avenue	Karl VonHone	Director/Harbormaster
Yarmouth	South Yarmouth	Ship Shops Inc	Pleasant Street, PO Box 248	Martyn Taubert	President
Yarmouth	South Yarmouth	Skippy's Pier	17 Neptune Lane		
Dartmouth	South Dartmouth	New Bedford Yacht Club	208 Elm Street, PO Box P-4		
Dartmouth	South Dartmouth	Dartmouth Harbormaster	One Bridge Street		
Dartmouth	South Dartmouth	Concordia Co., Inc	South Wharf, PO Box P203		
Dartmouth	South Dartmouth	Davis & Tripp Inc	1 Bridge Street	Bill Arnesson	Head Foreman
Dartmouth	South Dartmouth	Marshall Marine Corp	PO Box P266	John Garfield	President

TOWN	LOCALITY	FACILITY	ADDRESS	NAME	TITLE
Dighton	Dighton	Dighton Harbormaster	Town Hall, 979 Somerset Avenue		
Dighton	Dighton	Shaw's Boat Yard	86 Main Street	Guy Ransley	Owner
Dighton	Dighton	Taunton Yacht Club	Water Street	Robert T. Bedard	Secretary
Fairhaven	Fairhaven	Acushnet Fish Co. Pier	46 Middle Street		
Fairhaven	Fairhaven	Acushnet River Safe Boating Club	80 Middle Street		
Fairhaven	Fairhaven	D. N. Kelley & Son Wharf	32 Water Street.		
Fairhaven	Fairhaven	Fairhaven Shipyard and Marina Wharf	50 Fort Street.	Ron Fortier	Vice President
Fairhaven	Fairhaven	Fairhaven Harbormaster	40 Centre Street	Gary S. Golas	Harbor Master
Fairhaven	Fairhaven	Fairhaven Yacht Club and Marina	2 Elm Avenue		
Fairhaven	Fairhaven	Hathaway-Braleigh Wharf Co., Pier	12-14 Main Street.		
Fairhaven	Fairhaven	Linberg Marine Basin.	50 Middle Street.	Richard B. Searles	Estimator
Fairhaven	Fairhaven	Moby Dick Marina	2 River Avenue		
Fairhaven	Fairhaven	Norlantic Diesel Pier.	PO Box 151/Union Wharf		
Fairhaven	Fairhaven	USCG Aux. Flotilla	80 Middle Street		
Fairhaven	Fairhaven	Cozy Cove Marina	2 Elm Avenue		
Fairhaven	Fairhaven	Earl's Marina	Causeway Road		
Fairhaven	Fairhaven	Fairhaven Shipyard	50 Fort St		
Fairhaven	Fairhaven	Kelley & Sons Inc	32 Water Street		
Fairhaven	Fairhaven	Seaport Marina	110 Middle Ave		
Fall River	Fall River	Boat House	100 Davol Street		
Fall River	Fall River	Borden & Remington Corp. Wharf.	106 Ferry Street.		
Fall River	Fall River	Fall River Gas Co. Wharf.	120 Charles Street.		
Fall River	Fall River	Fall River Line Pier.	1 Water Street.		
Fall River	Fall River	Leone's on the Waterfront	464 Davol Street		
Fall River	Fall River	Massachusetts Towing Co., Globe Wharf.	Foot of Shaw Street.	DH Mauran	President
Fall River	Fall River	Northeast Products Co., Fall River Terminal, Wharf.	52 Ferry Street		
Fall River	Fall River	Peridot Chemicals Wharf.	106 Ferry Street.		
Fall River	Fall River	Point Gloria Marina	750 Davol Street		
Fall River	Fall River	Shell Oil Co., Fall River Terminal.	1 New Street		
Fall River	Fall River	Borden Light Marina	One Ferry Street		
Fall River	Fall River	Fall River Heritage State Park	200 Davol Street W	Robert Horton	Park Supervisor
Fall River	Fall River	Fall River State Ramp	Laurel Street		
Fall River	Fall River	Fall River State Ramp	Jefferson Street		
Fall River	Fall River	O'Connell, Capt. Joseph J. Co	180 River Street	Dan O'Connell	President
Freetown	East Freetown	Morgado Marina	93 Braley Road		

TOWN	LOCALITY	FACILITY	ADDRESS	NAME	TITLE
New Bedford	New Bedford	Bayline Marina, Inc.	109 Gifford Street		
New Bedford	New Bedford	Cape Island Express Lines Pier	1494 East Rodney French Blvd.		
New Bedford	New Bedford	City of New Bedford, Coal Pocket Pier	98 Front Street		
New Bedford	New Bedford	City of New Bedford, Homer's Wharf	98 Front Street		
New Bedford	New Bedford	City of New Bedford, Leonard's Wharf	98 Front Street		
New Bedford	New Bedford	City of New Bedford, North Terminal Wharf	98 Front Street		
New Bedford	New Bedford	City of New Bedford, Pier No. 3, Fisherman's Wharf	98 Front Street		
New Bedford	New Bedford	City of New Bedford, South Terminal Wharf	98 Front Street		
New Bedford	New Bedford	City of New Bedford, Steamship Pier	98 Front Street		
New Bedford	New Bedford	State Pier New Bedford	93 State Pier	Russ Parkman	Head of Dredge Operations
New Bedford	New Bedford	Crystal Ice Co.	155-178 Front Street.	Joseph E. Swift	President
New Bedford	New Bedford	Frionor U. S. A. Wharf	40 Herman Melville Blvd.		
New Bedford	New Bedford	Global Petroleum Corp., New Bedford Terminal Fueling Dock	30 Pine Street.		
New Bedford	New Bedford	Maritime Terminal Wharf	Whaler's Wharf.	Capt. Michael Taylor	Vice President
New Bedford	New Bedford	Massachusetts Towing Co.	New Bedford Wharf		
New Bedford	New Bedford	New Bedford Seafood Co-Operative Association Wharf	Co-Op Wharf		
New Bedford	New Bedford	Packer Marine	New Bedford Wharf		
New Bedford	New Bedford	Whaling City Marina	4 Popes Island		
New Bedford	New Bedford	Capt Leroy Deep Sea Fishing	Marine Park One, Pope's Island		
New Bedford	New Bedford	Gear Locker Marina	255 Pope's Island	Edwards Longo	Owner
New Bedford	New Bedford	Popes Island Harbor Development	Rte. 6	Mark White	President
New Bedford	New Bedford	Popes Island Marina	102 Popes Island	Marty Manley	Marina Manager
Somerset	Somerset	Gladding-Hearn Shipbuilding Pier.	1 Riverside Avenue.		
Somerset	Somerset	Montaup Electric Co., Somerset Station Wharf.	1606 Riverside Avenue.		
Somerset	Somerset	New England Power Co., Brayton Point Station Dock.	Brayton Point Road.		
Somerset	Somerset	Somerset Marine	3828 Riverside Avenue		
Somerset	Somerset	Somerset Harbormaster	Town Hall, 140 Wood Street		
Swansea	South Swansea	Swansea Marina	161 Calef Avenue		
Westport	Westport Point	Leach & Son	2055 Main Road		
Westport	Westport	Lees Wharf & Lobster	2065 Main Road	Robert Gifford	President
Westport	Westport	Spindle Rock Yacht Club	River Road	Russell Beede	Treasurer
Westport	Westport Point	Tripp & Sons, Inc	Cherry & Webb Road, PO Box 23	Richard Picard	Manager
Westport	Westport	Westport Harbormaster	Main Road	Richard B. Earle	Harbor Master
Aquinnah	Aquinnah	Aquinnah Harbormaster	65 State Road		

TOWN	LOCALITY	FACILITY	ADDRESS	NAME	TITLE
Chilmark	Chilmark	Chilmark Harbormaster	Dutcher Dock, PO Box 119	Dennis Jason	Harbormaster
Chilmark	Chilmark	Menemsha Texaco	Basin Road		
Chilmark	Chilmark	USCG Station Menemsha	Menemsha Basin		
Edgartown	Edgartown	Edgartown Marine	PO Box 215		
Edgartown	Edgartown	Edgartown Harbormaster	70 Main Street, PO Box 5158	Charles Blair	Harbor Master
Edgartown	Edgartown	Edgartown Yacht Club	1 Dock St	William Roman	Club Manager
Edgartown	Edgartown	Harborside Inn	South Water Street		
Edgartown	Edgartown	Mad Max Marina	PO Box 2821		
Edgartown	Edgartown	Memorial Wharf	Dock Street, PO Box 739		
Gosnold	Cuttyhunk	Cuttyhunk Marina	Cuttyhunk Island		
Gosnold	Cuttyhunk	Cuttyhunk Yacht Club	c/o Ann Kimball, 27 Curve Street, Lexington, MA		
Gosnold	Cuttyhunk	Frog Pond Marine	Cuttyhunk Island	James Barry	Owner
Gosnold	Cuttyhunk	Jenkins Moorings	Cuttyhunk Island		
Gosnold	Cuttyhunk	Town of Gosnold	Cuttyhunk Island	Asa Lombard	Harbormaster
Oak Bluffs	Oak Bluffs	Dockside Marina	Circuit Avenue, PO Box 1511	Terry McCarthy	Owner
Oak Bluffs	Oak Bluffs	East Chop Yacht Club	East Chop Drive		
Oak Bluffs	Oak Bluffs	Oak Bluff Harbor Marina	1 Circuit Avenue, PO Box 2676	Josh Williams	Marina Manager
Oak Bluffs	Oak Bluffs	Oak Bluffs Harbormaster	Town Hall, Lake Avenue	Todd Alexander	Harbor Master
Vineyard Haven	Vineyard Haven	Tisbury Harbormaster	PO Box 1239	Jay Wilbur	Harbor Master
Vineyard Haven	Vineyard Haven	Maciel Marine, Limited	48 Lagoon Pond Rd, PO Box 2156	Geoff Banfield	President
Vineyard Haven	Vineyard Haven	Coastwise Wharf Company	Beach Road Ext	Robert S. Douglas	Owner
Vineyard Haven	Vineyard Haven	Gannon and Benjamin	PO Box 1095	Virginia c. Jones	Office Manager
Vineyard Haven	Vineyard Haven	Martha's Vineyard Shipyard Inc	Beach Road, PO Box 1119	Philip P. Hale	President
Vineyard Haven	Vineyard Haven	Tashmoo Boat Yard	Tashmoo East		
Vineyard Haven	Vineyard Haven	Vineyard Haven Marina	52 Beach Road, PO Box 876		
Vineyard Haven	Vineyard Haven	Vineyard Haven Yacht Club	PO Box 507, Owen Little Way		
Nantucket	Nantucket	Marine Superintendent, Town of Nantucket, Marine & Coastal Resources Dept.	34 Washington Street, Town Pier	D.F. Fronzuto	Marine Superintendent
Nantucket	Nantucket	USCG Station Brant Point	Easton Street		
Nantucket	Nantucket	Madaket Marine	20 North Cambridge	Mike Petrosior	President
Nantucket	Nantucket	Nantucket Boat Basin	Swan Wharf, PO Box 1139	George Bassett Jr.	Director of Marina Operations
Nantucket	Nantucket	Nantucket Moorings	14 Millbrook Road		
Nantucket	Nantucket	Nantucket Yacht Club	PO Box 667		
Marion	Marion	Beverly Yacht Club	99 Water Street, PO Box 181		
Marion	Marion	Island Wharf Marine	2 Island Wharf Road		
Marion	Marion	Barden's Boat Yard	2 Island Wharf Road, PO Box 577	Susan Nilson	Project Manager

TOWN	LOCALITY	FACILITY	ADDRESS	NAME	TITLE
Marion	Marion	Burr Brothers Boats Inc	309 Front Street	Toby Burr	President
Marion	Marion	Tabor Academy Sailing	Tabor Academy		
Mattapoisett	Mattapoisett	Edey and Duff Ltd.	128 Aucoot Road	Bill St. Cyr	Owner
Mattapoisett	Mattapoisett	Mattapoisett Boatyard	Box 1032, 32 Ned's Point Road		
Mattapoisett	Mattapoisett	Mattapoisett Town Dock	Main Street	Steven Mach	Harbor Master
Mattapoisett	Mattapoisett	Blue Water Yachts	Aucoot Road		
Wareham	Onset	Wareham Harbormaster	Town Hall, 54 Marion Road	Don Dugan	President
Wareham	Onset	Wareham Harbormaster-Wareham River	Town Hall, 54 Marion Road	Michael Parola	Harbormaster/Shellfish Constable
Wareham	Onset	Wareham Harbormaster-Buttermilk Bay	Town Hall, 54 Marion Road	Michael Parola	Harbormaster/Shellfish Constable
Wareham	Onset	Wareham Harbormaster-East River	Town Hall, 54 Marion Road	Michael Parola	Harbormaster/Shellfish Constable
Wareham	Onset	Wareham Harbormaster-Sunset Cove	Town Hall, 54 Marion Road	Michael Parola	Harbormaster/Shellfish Constable
Wareham	Onset	Wareham Harbormaster-Shell Point	Town Hall, 54 Marion Road	Michael Parola	Harbormaster/Shellfish Constable
Wareham	Onset	Stonebridge Marina (Atlantic Boats)	5 East Boulevard		
Wareham	West Wareham	Wareham Boatyard Inc	Rose Point		
Wareham	Wareham	Cape Cod Shipbuilding Co	Narrows Road		
Wareham	Wareham	Zecco & Sons Inc. D.B.A. Warr's Marine Inc.	2 Warr Ave.	Tony Zeco	President
Barnstable	Centerville	Centerville Yacht Club	Yacht Club Road, PO Box 399		
<b>Rhode Island</b>					
Barrington	Barrington	Barrington Harbormaster	95 County Road		
Barrington	Barrington	Barrington Yacht Club	25 Barton Avenue	Nelson L. Hawkins	Manager
Barrington	Barrington	Brewer's Cove Haven Marina	101 Narragansett Avenue		
Barrington	Barrington	Lavin's Marina, Inc.	110 Shore Drive		
Barrington	Barrington	Stanley's Boatyard Inc.	25 Barton Avenue	Stephen J. Terhone	Yard Manager
Barrington	Barrington	Striper Marina	26 Tyler Point Road		
Barrington	Barrington	Barrington Harbormaster	95 County Road		
Bristol	Bristol	Bristol Marine	Poppasquash Road, P.O. Box 508	Andrew Tyska	President
Bristol	Bristol	Bristol Harbormaster	Thames Street, P.O. Box 289	Matthew Calouro	Harbormaster
Bristol	Bristol	Bristol Yacht Club	99 Poppasquash Road		
Bristol	Bristol	Shannon Yachts	19 Broad Common Rd.		
Warren	Warren	Anchorage Inc-Dyer Boats	57 Miller Street	Theodore Jones	President
Warren	Warren	Bay Queen Cruises	461 Water Street		
Warren	Warren	Blount Barker Shipbuilding, LLI	0461 Warren Street	Lisa Catterty	Controller
Warren	Warren	Ginalski Marina	6 Johnson Street		
Warren	Warren	Harbor Marine	Water Street		
Warren	Warren	Warren Harbormaster	1 Joyce Street		

TOWN	LOCALITY	FACILITY	ADDRESS	NAME	TITLE
Warren	Warren	Joe's Boat Yard	Johnson Street		
Warren	Warren	Speed's Marine Service	337 Water Street		
Warren	Warren	Touisset Point Marina	Touisset Road		
Warren	Warren	Water Street Yachts Services	259 Water Street		
E. Greenwich	Warwick	Norton's Shipyard & Marina, Inc.	Division Street, P.O. Box 106	Pat Norton	President
East Greenwich	East Greenwich	Anderson's Yard	PO Box 111		
East Greenwich	East Greenwich	East Greenwich Marina	28 Water Street		
East Greenwich	East Greenwich	East Greenwich Harbormaster	PO Box 111		
East Greenwich	East Greenwich	East Greenwich Yacht Club	12 Water Street, Box 267		
East Greenwich	East Greenwich	Greenwich Cove Marina, Inc.	45 Water Street	Robert D'Antuoro	Owner
East Greenwich	East Greenwich	Harborside Lobstermania	Water St & Queen St		
East Greenwich	East Greenwich	Milt's Marina	20 Water Street		
East Greenwich	East Greenwich	East Greenwich Harbormaster	PO Box 111	James Cullen	
Warwick	Warwick	Apponaug Harbor Marina	17 Arnolds Neck Drive	John A. Dickerson, Jr.	Owner/Manager
Warwick	Warwick	Apponaug Harbor Yacht Club	P.O. Box 7628		
Warwick	Warwick	Aqua Vista Marina, Inc.	21 Suburban Parkway		
Warwick	Warwick	Arnold's Neck Waterfront Park	Arnold's Neck Drive		
Warwick	Warwick	Bay Marina, Inc.	1800 West Shore Road		
Warwick	Warwick	Breezy Point Dock	33 Sayles Avenue		
Warwick	Warwick	Brewer's Yacht Yard At Cowesett	100 Folly Landing		
Warwick	Warwick	Carlson's Marina	125 Wharf Road		
Warwick	Warwick	City of Warwick Dock/Moorings	975 Sandy Lane	Bill DePasquale	Planner
Warwick	Warwick	C-Lark Marina	252 2nd Point Road		
Warwick	Warwick	George B. Slater Ramp	975 Sandy Lane		
Warwick	Warwick	Greenwich Bay Marina Club	1 Masthead Drive	John McGovern	General Manager
Warwick	Warwick	Gull Marina	40 Waterfront Drive		
Warwick	Warwick	Harbor Light Marina	200 Gray Street		
Warwick	Warwick	Irwin Yacht Sales	138 Wharf Road		
Warwick	Warwick	Little Rhody Yacht Club	315 Sea View Drive		
Warwick	Warwick	Marine Machinery	346 Pequot Avenue		
Warwick	Warwick	Masthead Marina (Greenwich Marina)	1 Masthead Drive		
Warwick	Warwick	Narragansett Bay Marina	923 West Shore Road	John Algieri	
Warwick	Warwick	Oakland Beach Yachting Ctr	36 Bay Avenue		
Warwick	Warwick	Pettis Boat Yard	1 Bay Lawn Avenue		
Warwick	Warwick	Pier 36 Marine Center	11 Ottawa Avenue		
Warwick	Warwick	Ponaug Marina	Arnold's Neck Drive	Raymond Chace	President

TOWN	LOCALITY	FACILITY	ADDRESS	NAME	TITLE
Warwick	Warwick	Warwick Bay Marina	1800 West Shore Road		
Warwick	Warwick	Warwick Cove Marina	2 Seminole Street		
Warwick	Warwick	Waterfront Marina	46 Waterfront Drive		
Warwick	Warwick	Wharf Marina	138 Wharf Road		
Warwick	Warwick	Winstead's Marina	472 Tiffany Avenue	Howard Winstead	Owner/Operator
Jamestown	Jamestown	Clark Boatyard	110 Racquet Rd		
Jamestown	Jamestown	Conanicut Marine Services, Inc.	1 Ferry Wharf	William Mungter	President
Jamestown	Jamestown	Jamestown Harbormaster	PO Box 337	Sam Patterson	Harbormaster
Jamestown	Jamestown	Conanicut Yacht Club	40 Bay View Drive		
Jamestown	Jamestown	Dutch Harbor Boatyard	252 Narragansett Avenue	Fred Lorensen	President
Jamestown	Jamestown	Jamestown Boat Yard	PO Box 347		
Little Compton	Little Compton	Fo'c'le Marina	PO Box 944		
Little Compton	Little Compton	Sakonnet Point Marina	5 Bluff Avenue		
Little Compton	Little Compton	Sakonnet Yacht Club	Sakonnet Point		
Little Compton	Little Compton	Little Compton Harbormaster	PO Box 944	Chief Ron Coffey	
Newport	Newport	1751 Bannister House	Bannister's Wharf		
Newport	Newport	American Shipyard	1 Washington Street		
Newport	Newport	Ann Street Pier	Spring Cottage Street		
Newport	Newport	Bannister's Wharf	One Banister Wharf		
Newport	Newport	Bowen's Wharf Company	020 Bowen's Wharf, P.O. Box 60	Bart Dunbar	President
Newport	Newport	Brown & Howard Marina	21 Brown and Howard Wharf		
Newport	Newport	Christie's Landing	Thames Street	John Taft	OPS Manager
Newport	Newport	Newport Harbormaster	Spring Cottage Street	Timothy Mills	Harbor Master
Newport	Newport	Coddington Landing	27 Coddington Wharf		
Newport	Newport	Ft. Adams State Park (RIDEM)	Harrison Avenue	Ray Aldrich	Principal Civil Engineer
Newport	Newport	Goat Island Marina	Goat Island	Andrew Urquhart	General Manager
Newport	Newport	Ida Lewis Yacht Club	Wellington Avenue		
Newport	Newport	Inn at Long Wharf	115 Long Wharf		
Newport	Newport	Inn on the Harbor	359 Thames St		
Newport	Newport	Long Wharf Charters	Long Wharf Marina, 68 Long Wharf		
Newport	Newport	Newport Public Ramps	Spring Cottage Street	Timothy Mills	Harbor Master
Newport	Newport	New York Yacht Club	5 Halidon Ave		
Newport	Newport	Newport Harbor Hotel & Marina	49 Americas Cup Avenue	Ted Schroeder	General Manager
Newport	Newport	Newport Marina	Lees Wharf	Steven M. Sullivan	Dockmaster
Newport	Newport	Newport Onshore	405 Thames Street		
Newport	Newport	Newport Regatta Club	Goat Island		



TOWN	LOCALITY	FACILITY	ADDRESS	NAME	TITLE
Newport	Newport	Newport Yacht Club	Long Wharf	Mark Mutty	Steward
Newport	Newport	Newport Yachting Center	P.O. Box 550	Chuck Moffitt	Marine Manager
Newport	Newport	Old Port Marine	Sayers Wharf, P.O. Box 141		
Newport	Newport	Sail Newport	53 Americas Cup Avenue		
Newport	Newport	Treadway Newport Resort & Marina	49 Americas Cup Avenue		
Newport	Newport	US Naval Station, Public Works	690 Peary Street		
Newport	Newport	USCG Station Castle Hill	Ridge Road	Dietmar F. Jackson	Commanding Officer
Newport	Newport	Wellington Hotel and Marina	49 Americas Cup Avenue		
Portsmouth	Portsmouth	Alden Yachts	1909 Alden Landing		
Portsmouth	Portsmouth	Bend Boat Basin	1 Lagoon Road		
Portsmouth	Portsmouth	Brewer's Sakonnet Marina	222 Narragansett Blvd	Jay Burns	General Manager
Portsmouth	Portsmouth	East Passage Yachting Center	1 Lagoon Road		
Portsmouth	Portsmouth	Lighthouse Marine, Inc.	Rhode Island Blvd		
Portsmouth	Portsmouth	Little Harbor Marina	One Little Hood Landing	Gerard Dischino	VP & General Manager
Portsmouth	Portsmouth	New England Boat Works	1 Lagoon Road		
Portsmouth	Portsmouth	Pirate Cove Marina	109 Point Road	Donald R. Kidd	President
Portsmouth	Portsmouth	Point Boatyard	192 Narragansett Blvd.		
Portsmouth	Portsmouth	Stonebridge Marina	17 Point Road		
Portsmouth	Portsmouth	Portsmouth Harbormaster	2270 East Main Street	Scott Trevors	
Tiverton	Tiverton	Boremco Bulk Storage Tiverton Terminal Pier.	25 State Avenue.		
Tiverton	Tiverton	Tiverton Harbormaster	343 Highland Avenue		
Tiverton	Tiverton	Riverside Marina	211 Riverside Drive		
Tiverton	Tiverton	Sakonnet Boathouse	169 Riverside Drive		
Tiverton	Tiverton	Standish Boatyard	1697 Main Street		
Tiverton	Tiverton	Tiverton Basin	169 Riverside Drive		
Tiverton	Tiverton	Tiverton Yacht Club	Riverside Drive		
Cranston	Cranston	Cranston Harbormaster	29 Arnold Avenue	Carl Hjerpe	
Cranston	Cranston	Edgewood Yacht Club	3 Shaw Avenue		
Cranston	Cranston	Port Edgewood	1128 Narragansett Blvd	Ray Mooney	General Manager
Cranston	Cranston	Rhode Island Yacht Club	One Ocean Avenue	Peter Holden	Past Commander
East Providence	East Providence	East Providence Harbormaster	145 Taunton Avenue	Ron Mathers	Harbor Master
East Providence	East Providence	Bullock's Cove Marine, Inc.	254 Riverside Drive		
East Providence	East Providence	East Providence Yacht Club	9 Pier Road	Mike Perry	Secretary/Treasurer
East Providence	East Providence	Getty Terminals Corp., East Providence Pier	Dexter Road and Massasoit Avenue.		
East Providence	East Providence	Gulf Oil, East Providence Terminal Pier	3355 Lyon Avenue.		

TOWN	LOCALITY	FACILITY	ADDRESS	NAME	TITLE
East Providence	East Providence	Mobil Oil Corp., East Providence Terminal Wharf	1001 Wampanoag Trail		
East Providence	East Providence	Narragansett Terrace Boatyard	250 Riverside Drive		
East Providence	East Providence	Ocean State Steel Wharf	300 Bourne Avenue		
East Providence	East Providence	Oyster House Marina	28 Water Street		
East Providence	East Providence	Wilkes-Barre Pier	Pier Road		
Pawtucket	Pawtucket	Narragansett Terrace Yacht Club	P.O. Box 15173		
Pawtucket	Pawtucket	Pawtucket, City of	175 Main Street	Michael Cassidy	Planning and Redevelopment
Providence	Providence	Algonquin LNG Wharf	121 Terminal Road.		
Providence	Providence	Block Island Ferry Landing	India Point Park		
Providence	Providence	Hudson Terminal Corp., Providence Wharf	29 Terminal Road.	Karissa Mooney	Research Engineer
Providence	Providence	Independent Cement Corp., Providence Terminal Wharf	139 Terminal Road.	Frank Poirier	Manager
Providence	Providence	India Point Marina (Shooter's)	25 Indian Street		
Providence	Providence	Lehigh Portland Cement Co., Providence Terminal Wharf	25 Terminal Road		
Providence	Providence	Northeast Petroleum Corp., Providence Terminal Pier	170 Allens Avenue.		
Providence	Providence	Old Harbor Marina	525 South Water Street		
Providence	Providence	Port of Providence, Berths 6 and 5	Municipal Wharf.		
Providence	Providence	Promet Marine Services Pier	242 Allens Avenue.	David A. Cohen	President
Providence	Providence	Providence Steamboat Co. Wharf	1 India Street.	Ditti Mauran	President
Providence	Providence	Sprague Energy Corp., Providence Terminal Pier	144 Allens Avenue.	Richard J. Wood	Terminal Manager
Providence	Providence	Motiva Enterprises LLC, Providence Terminal, Harbor Junction Pier	520 Allens Avenue.	S.E. Urban	Terminal Manager
Providence	Providence	Sun Co., Providence Terminal Dock	35 Terminal Road.		
Charlestown	Charlestown	Charlestown Harbormaster	4540 South County Trail		
Charlestown	Charlestown	Lavin's Landing	60 Sportsman Road		
Charlestown	Charlestown	Ocean House Marina, Inc.	60 Town Dock Road	Robert Lyons	President
Charlestown	Charlestown	Shelter Cove Marina	PO Box 85, 523 Charlestown Beach Rd	Wade Whittier	Manager
Charlestown	Charlestown	Charlestown Harbormaster	4540 South County Trail	Leonard R. Wood	Harbormaster
Narragansett	Narragansett	Captain's Tackle	33 State Street	Frank Blount	Owner
Narragansett	Narragansett	Long Cove Camp Sites & Marina	325 Point Judith Road		
Narragansett	Narragansett	Mettatuxet Improvement Assn	South River Road		
Narragansett	Narragansett	Middlebridge Marina	RR 11 Box 711 95 Middlebridge		
Narragansett	Narragansett	Narragansett Dock Works Inc	14 Gull Rd	Matthew Melchiori	President
Narragansett	Narragansett	Point Judith Fishermen Co-op	75 State Street		
Narragansett	Narragansett	Narragansett Harbormaster	975 Point Judith Road	Luther Freethy	Harbormaster

***Final Dredging Needs Study  
Rhode Island Region Long-Term Dredged Material Disposal Site Evaluation Project***

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TOWN	LOCALITY	FACILITY	ADDRESS	NAME	TITLE
Narragansett	Narragansett	Rhode Island State Pier	Great Island Road	Ray Aldrich	Principal Civil Engineer, RIDEM
Narragansett	Narragansett	Point Judith Yacht Club	Salt Pond Road		
Narragansett	Narragansett	Rhode Island Engine Company	P.O. Box 543, 79 State Street		
Narragansett	Narragansett	URI Bay Campus	South Ferry Road	William Hahn	Marine Superintendent
Narragansett	Narragansett	USCG Station Point Judith	Ocean Road		
New Shoreham	Block Island	A H Edwards Marine Repair	PO Box 708		
New Shoreham	Block Island	Block Island Boat Basin	Jobs Hill P.O. Box 369	Rally Migliaccio	G.M.
New Shoreham	Block Island	Block Island Maritime Institute	Center Road, P.O. Box 1811		
New Shoreham	Block Island	Champlin's Hotel and Marina	New Harbor, P.O. Box J	Joseph Grillo	President
New Shoreham	Block Island	Harbor Road Yacht Basin	P.O. Box G	Ken Lacoste	President
New Shoreham	Block Island	New Harbor Rental Moorings	P.O. Drawer 220	Larry Constantine	Harbormaster
New Shoreham	Block Island	Payne's New Harbor Dock	133 Beach Avenue		
New Shoreham	Block Island	Smuggler's Cove Marina	521 Connecticut Avenue		
New Shoreham	Block Island	Town of New Shoreham Dock	Water St. - PO Drawer 220	Larry Constantine	Harbormaster
New Shoreham	Block Island	Twin Maples	Beach Avenue		
New Shoreham	Block Island	USCG Station Block Island	Coast Guard Road		
North Kingstown	North Kingstown	Allen Harbor Marina	Allen Harbor Road	Dan O'Conner	Director, Dept. of Leisure Services
North Kingstown	North Kingstown	Brewer's Wickford Cove Marina	65 Reynolds Street	George Varga	Manager
North Kingstown	North Kingstown	Johnson's Boatyard	3 Esmond Avenue		
North Kingstown	North Kingstown	Mill Cove Yacht Sales	1 Phillips		
North Kingstown	North Kingstown	North Kingstown Harbormaster	8166 Post Road		
North Kingstown	North Kingstown	Pleasant Street Wharf	160 Pleasant Street	Eric Collins	General Manager
North Kingstown	North Kingstown	Port of Davisville/QP - RIEDC	Quonset Road	Jack Sprengel	Director of Operations & Utilities
North Kingstown	North Kingstown	Port of Davisville/Pier No. 2	Davisville Pier Road	Jack Sprengel	Director of Operations & Utilities
North Kingstown	North Kingstown	Port of Davisville/Pier No. 1	Davisville Pier Road	Jack Sprengel	Director of Operations & Utilities
North Kingstown	Davisville	Quonset/Davisville Navy Yacht Club	P.O. Box 641	Frank Arnold	Commander
North Kingstown	Saunderstown	Saunderstown Yacht Club	Ferry Road		
North Kingstown	North Kingstown	Wickford Bait & Tackle	1 Phillips Street		
North Kingstown	Wickford	Wickford Marine	P O Box 1401	Paul F. Galego	President
North Kingstown	North Kingstown	Wickford Shipyard, Inc.	125 Steamboat Avenue	Don Fraser	President
North Kingstown	North Kingstown	Wickford Yacht Club	165 Pleasant St		
South Kingstown	Wakefield	Billington Cove Marina	557 Pond Street	David Phillips	President
South Kingstown	Wakefield	Cap'n Jack's Marina	706 Succotash Road		
South Kingstown	Snug Harbor	Channel Marina	Snug Harbor		
South Kingstown	Peace Dale	Galilee Fuel Service	P. O. Box 34	Mark O'Neill	President

TOWN	LOCALITY	FACILITY	ADDRESS	NAME	TITLE
South Kingstown	Snug Harbor	Gooseberry Marina and Dock	392 Gooseberry Road		
South Kingstown	Jerusalem	Jim's Dock	109 Succotash Road		
South Kingstown	East Matunuck	Kenport Marina, Inc.	650 Succotash Road	Don Mattera	Owner
South Kingstown	Wakefield	Marina Bay Docking	210 Salt Pond Road	Judith A. Baccari	President/Manager
South Kingstown	Wakefield	Narragansett Yacht and Pointview Marina	11 Sherman Road	Frank Mazza	Owner
South Kingstown	Wakefield	Ocean State Marine Railway, Inc.	Gooseberry Road, P.O. Box 209		
South Kingstown	Wakefield	Point Judith Marina, Inc.	360 Gooseberry Road	Don Vivenzio	General Manager
South Kingstown	Wakefield	Point Judith Marina	360 Gooseberry Rd	Don Vivenzio	General Manager
South Kingstown	Wakefield	Ram Point Marina, Inc.	2 William Schmid Drive		
South Kingstown	Wakefield	Salt Pond Marine Railway, Inc.	43 Perrywinkle Road	Ken Gallup	President
South Kingstown	Wakefield	Salt Pond Marine Railway, Inc.	43 Perrywinkle Rd	Ken Gallup	President
South Kingstown	Wakefield	Silver Spring Marine, Inc.	362 Pond Street	Lynn Fiorenzano	President
South Kingstown	Jerusalem	Skip's Dock	1161 Succotash Road		
South Kingstown	South Kingstown	South Kingstown Harbormaster	1790 Kingstown Road	Barry Ennis	Harbormaster
South Kingstown	Wakefield	Snug Harbor Marina	410 Gooseberry Road	Al Conti	President
South Kingstown	Wakefield	Southern View Marina	392 Gooseberry Road #D		
South Kingstown	Wakefield	Stone Cove Marina Inc	134 Salt Pond Rd	Steve Wood	President
South Kingstown	Wakefield	URI Sailing Club	206 Salt Pond Road	Norman D. Windus	Director
South Kingstown	Wakefield	Vieira Marine Construction	502 Curtis Corner Road		
South Kingstown	Wakefield	Wakamo Park (Shoreline Realty)	697 Succotash Road		
Westerly	Westerly	Avondale Boat Yard, Inc.	47 Avondale Road	Malcolm Cooper	Owner
Westerly	Westerly	Covedge Bait & Tackle	93 Watch Hill Road		
Westerly	Westerly	Frank Hall Boatyard	3 India Point		
Westerly	Westerly	Grays Boat Yard Inc	91 Watch Hill Rd	James Gray, Jr.	President
Westerly	Westerly	HOB Yacht Sales	3 India Point		
Westerly	Westerly	Lotteryville Marina	25 Avondale Road	Roger M. Han	Co-owner
Westerly	Westerly	Pier 65 Marina	65 Margin St	Curtin	Owner
Westerly	Westerly	Richard's Marine Repair Service	19 Margin Street		
Westerly	Westerly	Viking Marina	19 Margin Street	Peter Vassilopoulos	Owner
Westerly	Westerly	Watch Hill Boat Yard Inc	21 Pasadena Ave	James E. Long	President
Westerly	Westerly	Watch Hill Docks	Avondale Road		
Westerly	Westerly	Watch Hill Yacht Club	P.O. Box 2933	Darryl Forrester	Club Manager
Westerly	Weekapaug	Weekapaug Fire District Marina	P.O. Box 326		
Westerly	Westerly	Weekapaug Yacht Club	23 Spray Rock Road	Robert Buffum	Commodore
Westerly	Westerly	Westerly Marina	41 Margin Street		
Westerly	Westerly	Westerly Yacht Club	1 Watch Hill Rd	Joseph Martin	B.O.D.

## **APPENDIX D**

### **Maintenance Dredged Material Projected For Federal Navigation Projects**

Assumptions and notes for the estimate of Federal Navigation Channel dredge volume projections.

1. Volume if dredged to project depth estimated from the difference between the authorized project depth (as derived from Project Maps [Massachusetts, September 1986 and Rhode Island, September 1988]) and water depths provided in conditional surveys. Survey dates ranged from 1991 to 2000. Estimated dredge cycles for these navigation projects are based on historical dredge cycles or determined using best judgment.
2. Estimated maintenance dredging volume and dredge cycle determined from historical records. In most cases, sufficient maintenance history was available to calculate an average dredge volume and average dredge cycle. If historical dredge records were limited, the dredge volume and dredge cycle are based on the previous maintenance dredge project performed and the date of next dredging treated as 2002.
3. Estimated maintenance volume and estimated dredge cycle obtained from the Long Island Sound Dredged Material Disposal EIS (October 2001) for Little Narragansett Bay (Westerly) and Point Judith Harbor (Narragansett).
4. Volume if dredged to project depth obtained from Dredged Material Management Plan Draft Environmental Impact Report for New Bedford and Fairhaven, Massachusetts (Office of Coastal Zone Management, April 30, 2002). A dredge volume of 1,318,000 cy would be required to achieve the project authorized depth and an additional 15,400 cy would be dredged from the USCG berth. Approximately 400,000 cy would be dredged from the outer harbor. All material dredged from New Bedford/Fairhaven is considered unsuitable for unconfined open water disposal.
5. Federal navigation projects that will use beach nourishment instead of a disposal site have been identified by the Corps and indicated by shading in the title in the following table.

[illegible]

[illegible]



Federal Navigation Projects	Method	Estimated	Est.	Last	Est. Next	Survey Date	Volume if Dredged to Project Depth (cy)	Projected Dredging Needs (cy)					Notes:
		Maintenance	Dredge	Year	Year to			Total Maintenance					
		Volume	Cycle	Dredged	Need				Volume (cy)				
		(cy/cycle)	(years)		Dredging			2002 to 2,006	2007 to 2,011	2012 to 2,016	2017 to 2,021	2002 thru 2021	
Cape Cod Canal		300,000	6	2002	2008				300,000		300,000	600,000	per Fran Donovan, ACOE
Bourne													
Chatham Stage Harbor	2	50,000	2	2001	2003			100,000	150,000	100,000	150,000	500,000	Beach nourishment project
Chatham													
Cross Rip Shoals	2	44,000	50	1944	2002							0	Beach nourishment project
Nantucket Sound													
Cuttyhunk Harbor	2	8,500	10	2000	2010				8,500		8,500	17,000	Beach nourishment project
Cape Cod Islands													
Edgartown Harbor			none	1940								0	Beach nourishment project
Martha's Vineyard													
Fall River Harbor	1		20	1980	2002	1998	905,800	452,900	452,900			905,800	
Fall River													
Falmouth Harbor	1		25	1977	2002	1997	2,500	2,500				2,500	
Falmouth													
Hyannis Harbor	2	38,000	6	1998	2004			38,000	38,000	38,000		114,000	Beach nourishment project
Hyannis													
Lagoon Pond			none	1973		1992						0	Beach nourishment project
Martha's Vineyard													
Little Harbor			none	1906		1992						0	USCG dredged to 17'
Woods Hole													(maintained by USCG)
Menemsa Creek	1		15	1974	2002	1992	23,300	23,300			23,300	46,600	Beach nourishment project
Martha's Vineyard													
Nantucket Harbor (Harbor of Refuge)	1	51,400	25	1989	2014	1998	3,800			51,400		51,400	Beach nourishment project

Federal Navigation Projects	Method	Estimated Maintenance Volume  (cy/cycle)	Est. Dredge Cycle (years)	Last Year Dredged	Est. Next Year to Need Dredging	Survey Date	Volume if Dredged to Project Depth (cy)	Projected Dredging Needs (cy)					Notes:
								2002 to 2,006	2007 to 2,011	2012 to 2,016	2017 to 2,021	Total Maintenance Volume (cy)  2002 thru 2021	
Nantucket													
New Bedford and Fairhaven	4		20	1953		1995	1,783,500	1,318,100	165,400	150,000	150,000	1,783,500	20-year dredging inventory for UDM
New Bedford													20-year baseline volume = 280,000 cy; will require containment sites
Onset Bay	1			1957		1995	26,100	26,100				26,100	
Wareham													
Pollock Rip Shoals				1955								0	Beach nourishment project
Nantucket Sound													
Taunton River				1940								0	
Taunton													
Vineyard Haven	1			1937		1992	17,700	17,700				17,700	
Martha's Vineyard													
Wareham Harbor	1			1894		1992	22,700	22,700				22,700	
Wareham													
Westport River		7,000	10	1984	1994		7,000			7,000		14,000	Beach nourishment project
Westport													
Woods Hole Channel				1939								0	
Woods Hole													
							Total Federal Navigation Projects					6,418,850	
							Less Federal Beach Nourishment Projects Total (See Footnote 4)					919,500	

Federal Navigation Projects	Method	Estimated	Est.	Last	Est. Next	Survey	Volume if	Projected Dredging Needs (cy)					Notes:
		Maintenance	Dredge	Year	Year to	Date	Dredged to					Total Maintenance	
		Volume	Cycle	Dredged	Need		Project	2002 to	2007 to	2012 to	2017 to	Volume (cy)	
		(cy/cycle)	(years)		Dredging	Depth (cy)	2,006	2,011	2,016	2,021	2002 thru 2021		
			Less New Bedford and Fairhaven Federal Navigation Project (See Footnote 5)								1,783,500		
			Total Projected Volume of Dredged Material from Federal Navigation Project used in Dredging Needs Study								3,715,850		
Footnotes:													

Footnotes:

1. Volume if dredged to project depth estimated from the difference between the authorized project depth (as derived from Project Maps [Massachusetts, September 1986 and Rhode Island, September 1988]) and water depths provided in conditional surveys. Survey dates ranged from 1991 to 2000. Estimated dredge cycles for these navigation projects are based on historical dredge cycles or determined using best judgment.
2. Estimated maintenance dredge volume and dredge cycle determined from historical records. In most cases, sufficient maintenance history was available to calculate an average dredge volume and average dredge cycle. If historical dredge records were limited, the dredge volume and dredge cycle are based on the previous maintenance dredge project performed.
3. Estimated maintenance volume and estimated dredge cycle obtained from the Long Island Sound Dredged Material Disposal EIS (October 2001) for Little Narragansett Bay (Westerly) and Point Judith Harbor (Narragansett).
4. Federal navigation projects that will use beach nourishment (beneficial use of dredged material) instead of a disposal site were identified by the Corps
5. Volume if dredged to project depth obtained from Dredged Material Management Plan Draft Environmental Impact Report for New Bedford and Fairhaven, Massachusetts (Office of Coastal Zone Management, April 30, 2002). A dredge volume of 1,318,000 cy would be required to achieve the project authorized depth and an additional 15,400 cy would be dredged from the USCG berth. Approximately 400,000 cy would be dredged from the outer harbor. All material dredged from New Bedford/Fairhaven is considered unsuitable by the Corps for unconfined open water disposal and the volume is not used in the RI Sound Dredging Needs Study.

## **APPENDIX E**

### **Process of Permitting for Approval for Ocean Disposal of Dredged Material**

The process of permitting disposal of dredged material includes several Federal and state regulatory agencies. The USACE is the permitting authority for ocean disposal of dredged material, however, EPA reviews each permit to ensure that the proposed disposal will comply with the criteria in 40 CFR 227.4, which ensures that the marine environment proposed disposal will not be unduly degraded or endangered. Ocean disposal is acceptable only when it presents: a) no unacceptable adverse effects on human health and no significant damage to the resources of the marine environment; b) no unacceptable adverse effect on the marine ecosystem; c) no unacceptable adverse persistent or permanent effects due to the dumping of the particular volumes or concentrations of these materials; and d) no unacceptable adverse effects on the ocean for other uses as a result of direct environmental impact.

An important aspect of the permitting process is an analysis of disposal alternatives (EPA/USACE 1992). Every permit application must thoroughly examine the need for ocean disposal and consider all alternatives, including beneficial use, upland disposal, and treatment technologies. Material may be permitted for ocean disposal only if there is no practicable alternative location or methods of disposal or reuse available that have less adverse environmental impact or potential risk to other parts of the environment.

The permitting process takes into account both the outcome of sampling and analysis and public and agency comments. Each permit application is announced via a public notice, with thirty days typically allowed for public comment. Comments are sought from state and Federal agencies for consistency with applicable laws and regulations. Under the Coastal Zone Management Act of 1972 (16 U.S. Code Section 1451), permit applications for dredging activities affecting water use in the coastal zone may not be issued prior to issuance of a certification from the affected state's coastal zone management office (in the case of LIS, Connecticut, New York, or both). All projects are also closely coordinated with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) who review sampling and analysis results and compliance with the Endangered Species Act. If EPA determines that the proposed project will not comply with the ocean disposal criteria, a permit cannot be issued. The NMFS and USFWS share this obligation, but final veto authority resides with EPA.

Ultimately, the decision to deny, approve, or place restrictions on a permit must meet the regulatory standard that the action causes no "unacceptable adverse impact." As a result, EPA and USACE cooperatively set permit conditions by considering the range of potential impacts and the environmental, economic, social, and political conditions associated with the proposed activities. National guidance for determining whether dredged material is acceptable for ocean disposal is provided in the Ocean Testing Manual (*Green Book*; USEPA/USACE, 1991). Regional implementation manuals, consistent with the *Green Book*, provide specific testing and evaluation methods for dredged material projects at specific sites or groups of sites. The Regional Implementation Manual (RIM) that covers RIS is currently under review by EPA and USACE, and should be finalized in 2003.

USEPA/USACE. 1991. Evaluation of Dredged Material Proposed for Ocean Disposal – Testing Manual. U.S. Environmental Protection Agency, Washington, D.C. and United States Army Corps of Engineers, Washington, D.C. EPA-503/8-91/001.

USEPA/USACE. 1992. Evaluating Environmental Effects of Dredged Material Management Alternatives – A Technical Framework. U.S. Environmental Protection Agency, Washington, D.C. and United States Army Corps of Engineers, Washington, D.C. EPA 842-B-92-008 80 pp + appendices.